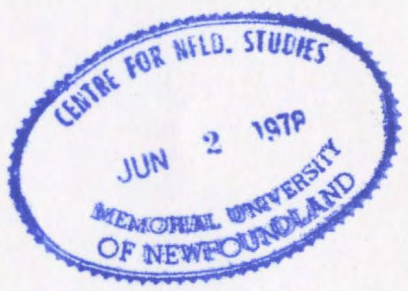
IMPLEMENTATION AND EVALUATION OF A CAREER GUIDANCE PROGRAMME FOR GRADE NINE STUDENTS IN A RURAL NEWFOUNDLAND SCHOOL: AN ALTERNATIVE TO PREVOCATIONAL; EDUCATION

MARIE ELIZABETH
CATHERINE McCARTHY


CENTRE FOR NFLD. STUDIES
JUN 2 1978
MEMORIAL UNIVERSITY
OF NEWFOUNDLAND

IMPLEMENTATION AND EVALUATION OF A CAREER GUIDANCE PROGRAMME FOR GRADE NINE STUDENTS IN A RURAL NEWFOUNDLAND SCHOOL: AN ALTERNATIVE TO PREVOCATIONAL EDUCATION

by

Marie Elizabeth Catherine McCarthy

A Thesis presented to

The Department of Educational Psychology

Memorial University of Newfoundland

In partial fulfillment

of the requirements for the degree

Master of Education

April 1976

St. John's Newfoundland

ABSTRACT

The purpose of this project was to develop, implement and evaluate a career guidance programme as an alternative to the Seal Cove Prevocational Programme for the attainment of a career educative objective.

The career guidance programme was carried out with an academic and general grade nine class in Mobile school, a rural Newfoundland central high school. The programme consisted of a variety of activities designed to give the students insight into occupational opportunities and into their own interests and abilities. The objectives of the programme were to increase the students' knowledge of themselves and the world of work, and to help them realistically relate their own self-characteristics to occupational opportunities.

A criterion of career development for the ninth grade level was established and a career knowledge instrument to measure this criterion was developed.

The career guidance programme was evaluated by pretest and posttest administrations of the career knowledge instrument. The programme was compared with the Seal Cove Prevocational Programme by a posttest administration of the career knowledge instrument to a sample of 150 grade nine academic and general students in the

Conception Bay area who had been involved in the Prevocational Programme. A t-test and an analysis of variance were carried out on the data related to the questions of the project.

The results showed that for both the academic and general students in Mobile there was a significant increase in their mean scores from the pretest to the posttest administration of the career knowledge instrument. In addition, on the posttest administration of the career knowledge instrument the mean scores of the grade nine students in Mobile were significantly higher than those scores of the grade nine students involved in the Seal Cove Prevocational Programme.

The conclusion was made that the experimental programme, the career guidance programme, achieved the overall goal of increasing the career knowledge of the students, whereas the Seal Cove Prevocational Programme was not effective in the achievement of this goal.

Finally, recommendations for further research were made concerning career guidance programmes, prevocational programmes and the career knowledge instrument.

ACKNOWLEDGEMENTS

The writer expresses her sincere thanks to Dr. William Spain, Chairman of her thesis committee, for the excellent direction and guidance given in the development and completion of this thesis. Appreciation is also extended to the other members of her committee, Dr. Dave Watts and Dr. Geoffrey Sainty for their kind assistance.

Gratitude is expressed to the staff members and students in Mobile and the Seal Cove Prevocational District for their participation and cooperation in this project. The patient assistance given by the staff of the Education Library is also appreciated.

Lastly, special thanks to my parents whose support and encouragement made this thesis possible.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

SECTION I

PURPOSE

The purpose of this project was to develop, implement and evaluate a grade nine career guidance programme as an alternative for the attainment of a selected career educative objective of the Prevocational Education Programme at the grade nine level.

The programme was implemented in Mobile Central High School, Mobile, Newfoundland, and was compared with the Prevocational Pilot Project at Seal Cove District Vocational School, Seal Cove, Newfoundland, for the school year 1973-74.

BACKGROUND AND SIGNIFICANCE

The Seal Cove Pilot Project

In 1971 the Seal Cove Pilot Project was innovated in the Conception Bay Center as a result of the high drop out rate that existed in the schools in that center (Prevocational Project Planning Committee, 1971).

When the project was first implemented in 1971, it gave all students in grades nine, ten and eleven in the three schools in the project area, Assumption Junior High and Roncalli High in Avondale and Queen Elizabeth High in Fox Trap, the opportunity to take prevocational courses at

the Seal Cove District Vocational School. The Seal Cove Pilot Project was the first attempt made in Newfoundland to integrate prevocational courses into the regular high school programme.

At the time this study was undertaken, the aims of the Prevocational Pilot Project were listed by the Project Planning Committee (1971) as fourfold:

1. To provide for students' experience with basic skills used in industry.
2. To give pupils insight into various occupations and into their own abilities so that they will be able to make a wise choice on their future careers.
3. To give greater relevance to the academic content of the curriculum.
4. To improve the retention rate in high school. (p. 2)

In a study completed after the first year of operations of the Seal Cove Pilot Project, Reccord (1973) discovered that teachers and administrators ranked the second objective well above all others in importance. In a later section it will be shown that this objective was closely related to the objectives of career guidance programmes deriving from current theoretical views on the career development of adolescents.

A Rationale for the Project

Since the lack of money, personnel, and facilities makes it impossible for an opportunity similar to the

Seal Cove Project to be available in most school systems of Newfoundland at this time, there is a need to provide alternative experiences. If possible, these experiences would attain the same objectives as those proposed for the Prevocational Programme. In the case of the second objective, at least one alternative experience immediately suggests itself.

Recent writings by both guidance practitioners and others interested in school improvement (Hansen, 1969; Marland, 1971; Drier, 1972) have stressed the importance of a viable programme of career guidance in each school if all students are to receive an education relevant to their needs and interests.

An alternative to the Prevocational Programme for objective two might be a counselor-initiated career guidance programme operated in the high school "to give students insight into various occupations and into their own abilities so that they will be able to make a wise choice on their future career" (The Planning Committee, 1971, p. 2).

The overall purpose of this project then was to determine if a career guidance programme implemented at the grade nine level would serve as an alternative programme to meet objective two of the Seal Cove Project.

SPECIFIC OBJECTIVES OF THE PROJECT

Pursuant to the overall purpose, this project aimed to fulfill the following specific objectives:

1. To develop a criterion of career development for students at the grade nine level;
2. to devise an instrument for grade nine Newfoundland students that would measure the knowledge aspects of career development;
3. to develop and implement a career guidance programme in Mobile Central High School at the grade nine level;
4. to evaluate the programme
   (a) against the criterion of career development,
   (b) against attainments on the criterion by grade nine students involved in the Seal Cove Prevocational Project.

RELATED REVIEW OF LITERATURE

When this project was being designed the writer examined the related literature that was available in order to obtain assistance in the development, implementation and evaluation of the career guidance programme. Although the various career education programmes that have been developed and implemented (Hansen, 1969; Drier, 1972; Stevenson, 1973; Pautler & Roeder, 1973; Bailey & Stadt, 1973) have suggested some broad evaluative procedures, none of these

programmes has included a specific design to evaluate a specific career guidance programme for grade nine students. In addition, the career education programmes that have been implemented have each been developed for a particular area and school and therefore have practical differences making direct applications in Newfoundland impossible.

A Need for Career Guidance

For the purpose of this project the term career guidance refers to assistance given to an individual in solving problems related to occupational choice and progress with due regard for the individual's characteristics and their relation to occupational opportunity.

Evidence seems to abound that many students need help at arriving at a decision about occupational goals. Schertzer (1971) reviewed a number of studies that reported sizable percentages (33%--35% or more) of seniors with no definite vocational plans after graduation. Gibson (1962) found that although most of the senior students in his sample had made a tentative choice, 76% had serious doubts about their choices. The Purdue Opinion Poll (1968) reported that only 21% of their national sample of high school students in the United States believed that they were receiving adequate help in vocational decision making. The Gallup Opinion Poll (1973) reported that nine in ten persons would like to have the schools give more emphasis to career education.

Consensus of opinion among a number of writers (Johnson, 1957; Fitch, 1960; Hansen, 1969; Herr & Cramer, 1972) was that pupils are poorly informed about occupational requirements and how to attain their vocational goals and therefore there was a need for more dissemination of occupational information.

Various writers (Hopson & Hayes, 1968; Hoyt, Evans, Mackin & Mangum, 1972; Bailey & Stadt, 1973) identified the need for career guidance as arising out of a number of factors, chief among which were the following:

1. Technological changes and their impact on the labor market.
2. Changes in the home and in the role of women.
3. Lack of awareness on the part of youth of their own potentialities and of the world of work.
4. Changes in the educational system.
5. Opening up of new and expanded employment and educational opportunities for minority groups.
6. Changes in attitude towards work.

Walton (1957) stated that if the serious manpower problems that exist were to be solved, career guidance was needed to aid in placing talent where it was needed. Moreover, he said, "Guidance is needed to strengthen the educational system. Its task is to provide motivation and meaning to provide the integrating element to the segmentary experiences which make up the student's education. In this way career

guidance raises the educational level of the nation" (p. 127).

Walton listed another important role played by career guidance today, providing individual security. He stated:

> A well-planned, carefully-chosen vocation suited to one's personality, interest and abilities constitutes an important factor in meeting this universal need. To the extent to which career guidance can aid the individual in this important enterprise, to that extent does it strengthen the individual, and in doing so strengthens society. Therefore, career guidance functions to add security to the nation, to the schools, and to the individual. (pp.127-128)

Although most of the writers who have stressed the need for career guidance are from the United States, career guidance is equally needed in Newfoundland, as well as the rest of Canada.

Bedel (1969) discussed the renaissance of vocational guidance in Canada. Bedel described that the renaissance was evident by a number of existing factors, chief among which were the following:

1. Recent guidance literature which refers more and more to career guidance;
2. promising new career guidance techniques;
3. the presence of various types of career guidance materials on the market;
4. recent interest shown in computer based sources of vocational information;
5. recent changes in counselor education programmes with more courses in career development and vocational information.

Bedel stressed the definite need for career guidance in Canada. In 1969 Bedel stated:

> The interest in vocational guidance has gone full swing since Parson's day. The model has changed - and the need for vocational guidance services has mushroomed. Technology has operated in such a way as to create a greater need for these services. (p. 32)

After completing a study on the career decisions of Canadian youth Breton and MacDonald (1967) found that when students voluntarily visited the school counselor, their job plans were second on the list of the most frequently discussed topics. Bedel (1969) has suggested then that the needs of Canada's youth are largely responsible for the re-awakened interest in career guidance.

Included among the recommendations made by the Newfoundland Royal Commission on Education and Youth (1967-68) was the recommendation that guidance be accepted as a vital and integral part of the Newfoundland educational system, and that a vocational guidance programme be established in Newfoundland schools.

In 1971 the Task Force on the Integration of Academic and Vocational Education in Newfoundland identified seven objectives for secondary education in Newfoundland. One of these objectives was as follows:

> To provide an introduction to the multiplicity of career opportunities, and promote occupational guidance by helping the student assess his occupational potential, interests and capabilities. (p. 4)

A study carried out on the career decisions of Newfoundland youth (1973) revealed that Newfoundland high school students did not have full and proper knowledge concerning the different provincial post-secondary institutions and the programmes they offer. The committee that carried out the study also found that the students had unrealistic perceptions of employment opportunities that exist for graduates from the various programmes offered by the post-secondary institutions in Newfoundland.

The Committee (1973), therefore, recommended that:

> School systems should develop effective guidance programmes so that high school students, at both the junior and and senior level, will be able to intelligently evaluate the different programmes offered by the various post-secondary institutions. (p. 201)

The youth of Newfoundland and all of Canada have the same need for career guidance as the youth of America. Bedel (1969) stated, "The need for career guidance is there - I would suggest that the emerging counselor in Canada has begun to accept the challenge" (p. 28).

General Career Education Theory

Baer and Roeber (1964), Hoppock (1967), Slocum (1967), Hansen (1969), Marland (1971) and Wenrich (1971) have suggested that career guidance should pervade the entire school possibly taking its major form in a sequential, integrated curriculum from kindergarten to grade twelve. Slocum (1967) suggested the following:

> Much of the floundering of young men and women in occupational decision-making is unnecessary. We have the necessary agency -- the public school system - and the knowledge - from social and behavioral research - to introduce a much greater degree of rationality into occupational choice and preparation. What adolescents need most of all is a conceptual map of the world of work for use in interpreting information about occupations and in understanding the probable consequences for careers of alternative occupational and educational decisions. This can be communicated most effectively through a programme of occupational guidance through the curriculum. (p. 754)

Wenrich (1971) stressed that career education should be at the core of the total process of education. He stated:

> The purposes and processes of occupational education have become so enmeshed with the purposes and processes of education in general that we no longer think of vocational education as an entity, separate and apart from education. Career planning and career development must permeate the whole educational system. (p. 27)

The definition and philosophy of career education were given much consideration by the American Vocational Association Task Force in 1972. This Task Force reported:

> Career education is needed by and intended for all people. It is a people-oriented concept which is responsive to public demand for both relevance and accountability . . . . Career education provides the means by which the educational system can focus on career development, thereby expanding options for individuals and helping them achieve self-determined objectives . . . . Career education provides the unifying core for the total educational enterprise . . . it should assure that all school leavers are prepared for work. (pp. 12-14)

Recent authors on career education (Hansen, 1969; Marland, 1971; Hoyt et al., 1972; Martin, 1972; Bailey & Stadt, 1973) have suggested that throughout the entire educational process, career guidance and counselling services

must be made available to help the individual develop his self-concept, to help him realize his potential and to help him make appropriate plans for his career.

These same authors agree that career education is a developmental process which should begin in early childhood and extend throughout the elementary schools, the junior and senior high schools, the community college and the adult continuing education programmes. Career guidance, as a part of the total career education process, has a distinctive role to play for each of these levels.

Theoretical Implications for a Grade Nine Career Guidance Programme

If career guidance practices are to be effectively evaluated and improved, then their bases should be found in some sound consistent theoretical underpinnings.

During the past two decades the developmental self-concept theory of vocational development has appeared and made a great impact on guidance thinking. In the broad sense of the word, there are a number of individuals who are developmental theorists. Two major leaders in the field of career development who use the developmental approach to explain vocational behavior are Donald E. Super and Edwin L. Herr. The contributions of these two men will be reviewed because of their direct theoretical implications for career guidance in the ninth grade.

Super--A theory of career development. Donald E. Super has been the most visible psychologist proposing a developmental approach to the explanation of vocational behavior. Other theorists preceded Super with theories that had explicit developmental components, however, Super referred to the work of these theorists (Form & Miller, 1949; Ginzberg, Ginsburg, Axelrad & Herma, 1951) as influences when he constructed his developmental approach to vocational psychology. In addition, Super was also influenced by Snygg and Combs (1949) with their phenomecological field of theory, Rogers (1951) with his self-concept theory, Buehler (1933) with her developmental psychology and Williamson (1950), a trait psychologist with a rigorous scientific approach.

Super, after surveying the various elements of theories of vocational development, organized these elements into a summary statement of a comprehensive theory. Super (1953) stated his theory in a series of ten propositions:

1. People differ in their abilities, interests, and personalities.
2. They are qualified, by virtue of these characteristics, each for a number of occupations.
3. Each of these occupations requires a characteristic pattern of abilities, interests, and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.

4. Vocational preferences and competencies, the situations in which people live and work, and hence their self concepts, change with time and experience (although self concepts are generally fairly stable from late adolescence until late maturity), making choice and adjustment a continuous process.

5. This process may be summed up in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in turn be subdivided into (a) the fantasy, tentative, and realistic phases of the exploratory stage, and (b) the trial and stable phases of the establishment stage.

6. The nature of the career pattern (that is, the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socio-economic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.

7. Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and interests and partly by aiding in reality testing and in the development of the self concept.

8. The process of vocational development is essentially that of developing and implementing a self concept: it is a compromise process in which the self concept is a product of the interaction of inherited aptitudes, neural and endocrine make-up, opportunity to play various roles, and evaluations of the extent to which the results of role playing meet with the approval of superiors and fellows.

9. The process of compromise between individual and social factors, between self concept and reality, is one of role playing, whether the role is played in fantasy, in the counseling interview, or in real life activities such as school classes, clubs, part-time work, and entry jobs.

10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits, and values; they depend upon his establishment in a type of work, a work situation,

> and a way of life in which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate. (p. 190)

Criterion of career development for ninth graders.

Theorists who use the developmental approach to understand vocational behavior have proposed a number of constructs related to the theory. One construct concerns developmental stages. Several developmental psychologists (Beuhler, 1933; Miller & Form, 1949; Ginzberg, et al., 1951; Havighurst, 1953) have outlined general life stages, and have related them to vocational development. Super (1963) presented similar hypothesized outlines of developmental stages.

In Super's scheme, early adolescence (ages 14-18) is regarded as the Tentative substage of the Exploratory stage. The developmental task of the Tentative substage is to crystallize a vocational preference. While the crystallization task can occur at any age, as can all the vocational development tasks, it most typically occurs during the 14 to 18 age range and thus is the task applicable to the students who were involved in this project.

The attitudes and behaviors relevant to the crystallization stage identified by Super, Starishevsky, Matlin and Jordaan (1963) are as follows:

(a) awareness of the need to crystallize
(b) use of resources
(c) awareness of factors to consider
(d) awareness of contingencies which may affect goals
(e) differentiations of interests and values

(f) awareness of present - future preference
(g) formulations of a generalized preference
(h) consistency of preference
(i) possession of information concerning the preferred occupation
(j) planning for the preferred occupation
(k) wisdom of the vocational preference. (p. 84)

In 1960 Super and Overstreet completed the Career Pattern Study on the maturity of the vocational behavior of a group of ninth grade boys. From the data of this study Super and Overstreet (1960) found that "a substantial number of boys are not yet ready, in the ninth grade, to decide on direction of endeavor, or, specifically on a future occupation . . . the typical ninth grader does not understand himself and his potentialities as well as he should" (pp. 152-153).

On the basis of the Career Pattern Study, Super came to the conclusion that specific vocational choice planning was not appropriate at the grade nine level. Super (1960) stated:

> In the ninth grade there must be early identification, not for vocational choice or selection but for vocational exploration. Since the aptitudes, interests, self-knowledge and attitudes of ninth graders are still developing and changing, some of them only slightly but some of them considerably; since the cases in which important changes do take place cannot, in the present state of our knowledge of vocational development, be identified in the ninth grade; and since ninth graders tend to be psychologically ready for vocational exploration but not for vocational choice; the identification of vocational potential in ninth graders should be designed to help with the making of decisions for vocational exploration rather than decisions of vocational preparation. Vocational exploration involves a commitment to find out about oneself and about some aspect or segment of the world

> of work, whereas vocational preparation involves a commitment to pursue a line of endeavor deemed to be appropriate. Ninth graders tend to be ready for the former, unready for the latter. (p. 109)

Career guidance for the ninth grade. Osipow (1968), in reviewing Super's theory of vocational development, concluded that it had the most direct implications for providing specific guidelines for career guidance practice. The implications of Super's theory and his study with ninth grade boys for the organization of education in the high school were as follows: it should facilitate exploration; should not require commitment to a field although it might to a level (e.g. college or non-college); and should not be occupationally preparatory in any narrow sense, at least in the first years of high school. The implications for a career guidance programme in the ninth grade are as follows: it should (a) help the ninth grader attain a realistic understanding of himself; (b) explore and develop in the student an awareness of the various broad occupational areas in the world of work; and (c) help the student relate relevant information about himself to information about the world of work so that he will be able to identify broad occupational areas and levels which are appropriate for him. Objectives of career guidance programmes in the ninth grade should be kept general since the task of career guidance at that level is essentially one of furthering vocational development and providing for career exploration rather than

fostering and promoting specific vocational choices.

Osipow (1968) stated the implications of Super's theory and Career Pattern Study as follows:

> The school curriculum should foster planfulness aimed at helping youngsters become aware of their level of occupational aspiration, and the general amount of education required to achieve that level. This self-knowledge could be developed without specifically deciding on an occupational goal, which would be premature in the ninth grade. In fact, rather than restrict occupational possibilities at that age, the school should exert its efforts to broaden the students' occupational perspectives and to teach him to use available resources for exploration effectively. (p. 132).

The Career Pattern Study by Super is the most definite longitudinal research programme related to career development in the middle school years. Evans, Hoyt and Mangum (1973) stated, "Super, more than any other individual, is responsible for policy decisions leading to the middle school years as being exploratory in today's current career education programmes" (p. 41).

A second longitudinal career development research programme known as the Career Development Study by Gribbons and Lohnes (1968) reported no data contradicting Super's cautions regarding specific vocational planning with youth during the middle school years including ninth graders.

Herr--Career development themes for ninth grade level. Dr. Edwin L. Herr, more than any other individual was responsible for introducing the concept of infusion of career education concepts within the total school curriculum.

In 1972, Dr. Herr was commissioned by the Center for Vocational and Technical Education, Ohio State University, to prepare the paper "Review and Synthesis of Foundations for Career Education." In this paper Herr included an extensive review of the literature related to theories of career development. Evans et al. (1973) summarized Herr's review of literature as follows:

> Career development is an ongoing process which extends from infancy through at least young adulthood. Thus, the time when programs mounted to intervene in career development should begin is during the first decade of life . . . . Career development can be described in terms of learning tasks, frequently culturally defined, which are important at each stage of development . . . . Individuals differ in their readiness for career development (and) these differences . . . are complex. Differences in readiness suggest the need for different types of experiences to be available at any given educational level . . . . Career development is modifiable (thus) the structure of the school, the timing of decision points, cultural expectations can each affect the unfolding of career development . . . . The attitudes, knowledge and skills which make up career development should weave through and be reinforced by many educational experiences and the attitudes of those who monitor the experiences . . . . A displaced or unemployed adult may be as illiterate in terms of career as an elementary child. (p. 47)

While Herr identifies the above as "assumptions" based on theories of career development, his "assumptions" are firmly grounded in a research base. Given such realities of career development, Herr then suggested the major themes that ought to be promoted in the implementation of career guidance programmes if they are to facilitate career development.

The prime considerations and factors for career development at the junior high school level according to Herr (1972) were as follows:

Prime Considerations: Translation of self-concept into vocational terms; dealing with exploratory needs with purpose and with intent.

Factors

(a) Using exploratory resources
(b) Relating interests and capacities
(c) Identifying personal strengths which one wants to exploit in formulating a vocational preference
(d) Understanding the interdependence of the educational and occupational structures
(e) Differentiation of interests and values
(f) Developing implications of present-future relationships
(g) Accepting one's self as in process
(h) Relating changes in the self to changes in the world
(i) Learning to organize one's time and energy to get work done
(j) Learning to defer gratification, to set priorities
(k) Acquiring knowledge of life in organizations
(l) Preparation for role relationships
(m) Preparation for level and kind of consumption. (p. 9)

The factors cited by Herr provide the outlines for a structure by which the educational process can be harmonized with the child's development. When translated into behavioral objectives, these factors suggest that the emphasis in career guidance at the grade nine level be on exploration and expansion of generalizations about the relationships of self-characteristics to educational and occupational options. Herr and Cramer (1972) suggested that the year of grade nine is a transition year in which intensive, almost frenetic, exploration can be expected.

Summary

Dr. Samuel H. Osipow has been both a valuable contributor to and summarizer of the research literature in the field of career development. In 1972, Dr. Osipow prepared a paper for the National Conference on Career Education, Ohio State University. Evans et al. (1973) stated that in this paper "Osipow does a masterful job of summarizing some current major theories of career development" (p. 44). Evans et al. concluded that the most significant statements made by Osipow in his paper were as follows:

> Perhaps the most important . . . is the need to develop programming which is not too rigid or too tightly conceived . . . the very early and crucial years can be spent, not in leading the child to develop a specific vocational preference, but rather help him develop certain fundamental attitudes which will enable him to make necessary decisions later on in a more suitable manner . . . it is not realistic to expect an individual to choose a career in the ninth grade, to train for it, and assume that the issue is forevermore closed . . . the stability of field preferences during the high school years suggests a way out of this dilemma by means of education through occupational clusters, the heart of the Office of Education career education programmes that are emerging today. (p. 46)

The above quotations from Osipow's paper show that Osipow has provided a substantial research base to those career education practitioners who want to keep career options open for the ninth graders.

The career exploration advocated by Super, Herr, Osipow and others (Matheny, 1969; Gambino, 1972) for

adolescents in the ninth grade is defined by Howard and Stoumbis (1969) as "the technique of leading students to discover and explore their particular interests, aptitudes and abilities so that they would be able to make wise decisions regarding educational and vocational opportunities" (p. 25). Students in the ninth grade are old enough to ask: What am I going to be when I grow up? However, making firm career choices in the ninth grade is premature, and these students are restrained by law from most forms of employment. Thus, as Evans et al. (1973) suggested, exploration of self in relation to careers and work is the principal task of a career guidance programme in the ninth grade.

From the review of literature presented in this section it can clearly be seen that the objectives of a grade nine career guidance programme derived from current theoretical views on the career development of adolescents are very closely related to objective two of the Seal Cove Prevocational Programme.

LIMITATION

Care must be taken in generalizing the results of this project to Newfoundland as a whole. The two factors which must be considered before generalization can take place are:

1. The similarity to the Mobile and Seal Cove Prevocational District situations.
2. The career guidance programme depends on the individual conducting it, so generalization must take into account the ability to replicate the programme.

OVERVIEW

Section I presented the purpose and background of the project and a review of related literature. Section II will be devoted to the design of the project, the sample, the instrument and scoring method used. Section III will give a basic description of the career guidance programme implemented in Mobile. Section IV will consist of a report of the findings of this project. The final section will discuss the findings reported in Section IV. In addition, observations and conclusions will be made, followed by recommendations and suggestions for further research.

SECTION II

METHODOLOGY

The purpose of this section is to describe the procedures which were followed in the project. It is organized under four subheadings: general design of the project; the sample; instrumentation; and the scoring method.

GENERAL DESIGN OF THE PROJECT

The following steps were followed in the procedure of the project:

1. From the review of literature a criterion of career development suitable for students at the grade nine level was developed.
2. From the developed criterion, an instrument was devised to measure the amount of knowledge grade nine students have in the areas of career development of self, world of work and the relation between self and the world of work.
3. The career knowledge instrument was used as a pre-test and administered to the grade nine students in Mobile Central High School in April, 1974.
4. A career guidance programme was then implemented that involved the grade nine students in Mobile.

5. When the career guidance programme was completed at the end of May, 1974, the career knowledge instrument was administered in Mobile as a posttest.

6. At the end of May, 1974, the career knowledge instrument was administered as a posttest to a sample of grade nine students who had completed the first year of the Seal Cove Prevocational Education Project.

7. Evaluation Procedure:

The programme was evaluated by making comparisons between:

(a) Pretest Mobile - - - - - Posttest Mobile

(b) Posttest Mobile - - - - Posttest Seal Cove

In making these two major comparisons the following questions were considered important for the purpose of this project and were therefore used in the evaluation procedure.

(1a) Was there a significant gain in the mean scores of grade nine students at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument?

(1b) Was there a significant gain in the mean scores of grade nine students in the academic class at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument?

(1c) Was there a significant gain in the mean scores of grade nine students in the general class at Mobile Central High School from the pretest to the posttest

administrations of the career knowledge instrument?

(1d) Was there a significant difference in the mean scores of grade nine students in the academic class and grade nine students in the general class at Mobile Central High School on the posttest administration of the career knowledge instrument after correcting for the mean scores of both classes on the pretest administration?

(2a) Was there a significant difference in mean scores of grade nine students in Mobile Central High School and grade nine students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

(2b) Was there a significant difference in mean scores of grade nine academic students in Mobile Central High School and the grade nine academic students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

(2c) Was there a significant difference in mean scores of the grade nine general students in Mobile Central High School and the grade nine general students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

(2d) Was there a significant difference in the mean scores of grade nine general class in Mobile Central High School, the grade nine academic class in Mobile

Central High School, the grade nine general class in the Seal Cove Prevocational District and the grade nine academic class in the Seal Cove Prevocational District on the Posttest administration of the career knowledge instrument?

THE SAMPLE

The sample consisted of the two grade nine classes in Mobile Central High School and six grade nine classes from the Conception Bay Center and Conception Bay South School Districts.

The Mobile sample was used in the pretest and posttest administrations of the career knowledge instrument and the career guidance programme. Pretest and posttest administrations were made without prior announcements, therefore, absenteeism on both days of the test administration was assumed to be random.

The Conception Bay District sample was involved in the Seal Cove Prevocational Project and the posttest administration of the career knowledge instrument. This sample will be referred to as a sample from the Seal Cove Prevocational District.

The total sample from Mobile and the Seal Cove Prevocational District consisted of grade nine general and academic students since there was evidence (Turpin, 1972; Reccord, 1973) that the results of career guidance may be

different for slower students than for average or above average students.

Description of Mobile

Mobile is a very small rural community on the Southern Shore of Newfoundland, approximately twenty miles from St. John's. The Central High School was built in Mobile because of its central location for students from the larger surrounding communities of Bay Bulls, Witless Bay, and Tors Cove. It is one of three central high schools on the Southern Shore under the Roman Catholic School Board for Ferryland.

Mobile Central High School had approximately 400 students (boys and girls) in grades seven, eight, nine, ten and eleven. It had a staff of 14 teachers. There were two classes of grade nine students in the school, grouped according to academic ability. The "brighter" grade nine class consisted of 35 students. All of these intended to finish high school and attend some other post high school educational institution. The "slower" class consisted of 30 students. These students were at times divided into two groups, one of which obtained special remedial help in specific subjects. Many of the students in the "slower" class did not intend to further their education past high school; some did not intend to finish high school; and about eight intended to drop out of school at the end of the school year in June, 1974.

Description of Seal Cove Prevocational District

The sample of students involved in the posttest administration of the career knowledge instrument was drawn from three schools within the district that provide feeder schools for the Seal Cove Prevocational Programme. Two of these schools come under the Roman Catholic School Board for Conception Bay Center. Assumption Junior High, a school for girls, had approximately 300 students in grades seven, eight and nine. The other high school, Roncalli Central High, had only boys in grades seven to nine, but had both boys and girls in grades ten and eleven. This school had a student population of approximately 500.

The third school involved was Queen Elizabeth Regional High in Foxtrap. This school was under the Conception Bay South Integrated School Board and had approximately 600 students in grades nine, ten and eleven.

As in Mobile, the grade nine students in these three feeder schools were grouped according to academic ability. Therefore, each school had at least one grade nine "brighter" class and one grade nine "slower" class, as did the Mobile school, and a special education class.

Although there were approximately 400 grade nine students in the three feeder schools for the Seal Cove Prevocational Programme, the sample considered adequate to use in the project was a random sample of one academic and one general class from each of the three schools. The six grade

nine classes together consisted of 150 students.

At the time this project was carried out there was one guidance counselor working in the two feeder schools in Avondale, and the Foxtrap school had a guidance counselor. However, no organized career programmes were offered in any of the three schools for the grade nine students involved in this project. The only possible types of career guidance services offered for these students were participation in a Career's Day and the availability of career information through a Guidance Resource Center.

Prior to attending the Seal Cove Prevocational Programme, the students, while in grade eight, were oriented to the options offered in the programme mainly with the use of the Prevocational Information Package (Hicks, 1973).

Table 1 shows the number of students involved from each school district in their respective programmes according to their academic level.

INSTRUMENTATION

The Search for a Suitable Instrument

The writer could find no instruments developed that would be suitable to use for the purpose of her project. Although extensive research has been done on career development, few instruments have been devised to measure or evaluate a person's level of achievement in the career developmental process. In addition, the writer was

Table 1

Grade Nine Sample Involved in Project

School	Pretest	Programme	Posttest	Enrollment
Mobile*	53	60	53	60
Academic	28	32	29	32
General	25	28	24	28
Seal Cove District			150	
Academic			85	
General			65	

*A total of 46 students in Mobile completed the entire programme (the pretest, the career guidance programme and the posttest). The remaining 14 students were absent on one or both test days.

interested in an instrument designed specifically to measure career knowledge at the grade nine level of students in Newfoundland.

In Super's Career Pattern Study (1960) with grade nine boys, he used an instrument he devised to measure those boys' vocational maturity. Gribbons and Lohnes (1968) in their Career Development Study used a Readiness for Vocational Planning Scale. These two instruments, used by Super and Gribbons and Lohnes, were used as models in the development of the scoring method for the instrument used in this project.

Development of Career Knowledge Instrument

Since there was no instrument already devised suitable to use in the project, the writer devised the instrument that was used. There were three main steps in the development of the instrument:

1. From the review of research literature on career development, especially at the ninth grade level, a criterion of career development at that level was established.
2. Along with the basic criterion developed by various theorists on career development, the writer surveyed a number of career guidance programmes which had been devised and used at the ninth grade level.

One such programme, K-12 Guide for Integrating Career Development into Local Curriculum by Harry N. Drier (1972), included a list of objectives for the different school levels which the career guidance programme should achieve.

Using the basic criterion and following the same pattern used by Drier, the criterion of career development for students at the grade nine level was stated in the form of desirable objectives that Newfoundland grade nine students should be achieving. The list of objectives can be found in Appendix I. The objectives clearly showed that the criterion of career development for grade nine students consisted of exploration in three main areas:

(a) Self

(b) World of Work--including both educational and occupational information

(c) Relating Self to the World of Work

3. The third step was to use the list of stated objectives to draw up a list of questions that could measure the degree of attainment of these objectives; that is, measure the student's knowledge in the three areas mentioned above against the criterion of career development for the same students. This list of questions was then the career knowledge instrument used in the pretest and posttest administrations.

The instrument can be found in Appendix II.

Description of the Instrument

The instrument used in this project as a pretest and posttest consisted of 50 questions. The 50 questions in the total scale were divided into three main subscales:

1. Self--this subscale covered the student's own awareness of the career planning process and his acquired amount of knowledge and awareness of his own interests and abilities.
2. World of Work--this subscale included questions in the two areas of occupational and educational information. The questions covering occupational information included the concepts of why people work at an occupation, job classification, the educational training required for occupational areas, job families and on-the-job training. The questions covering educational information measured the student's knowledge of educational training opportunities both inside and outside the province of Newfoundland. Questions included various careers as related to different types of training institutions, length of training required, degree of high school education required and general cost of training.
3. Relation of Self to World of Work--this subscale measured the student's ability to relate his acquired

knowledge of self to his acquired knowledge of world of work. More specifically, the student was required to relate interest areas, abilities and personality characteristics with suitable careers.

Most of the 50 questions were free-response questions, requiring one or two lines for an adequate answer. There was one matching question and three multiple choice questions.

The maximum length of time required by students to complete the questionnaire was two hours.

Rationale for Instrument Form

The purpose of the career knowledge instrument was to measure the degree of attainment of the criterion of career development for ninth graders which was stated in the form of 23 objectives (Appendix I). These 23 specific objectives were closely related to the more general objective, listed as objective two of the Seal Cove Prevocational Project.

For the instrument to best achieve its purpose, the free-short-response item was considered to be the most suitable form to use for most questions. The free-response item required only a word, a phrase, a sentence or the writing of a short list for a response. These items involved the responses being supplied by the student rather than merely identifying the response from a list of suggested answers.

The criterion of career development for grade nine students involved not only having information about self and the world of work but more important, having the ability to relate relevant information about self to information about the world of work. Therefore, free-response questions were necessary for the student to be able to differentiate his self-characteristics (interests, abilities and personality characteristics) from those of others, and for him to be able to identify broad occupational areas and levels which may be more appropriate for him.

The free-response questions then gave the students the opportunity to relate any knowledge he had about the world of work to his own unique self-characteristics. Questions not involving the free-response would have eliminated this opportunity.

The free-response form of question had the advantage of familiarity and naturalness. In addition, Stanley and Hopkins (1972) stated, "The free-response questions may almost completely eliminate guessing and can measure levels of understanding beyond the 'knowledge' category of the Taxonomy of Educational Objectives" (p. 218).

SCORING METHOD USED FOR THE INSTRUMENT

In the development of the instrument, desirable correct responses were formulated for the questions.

A scoring key was then designed by using all correct responses to all items as a basis. The scoring keys used by Super and Overstreet (1960) and Gribbons and Lohnes (1968) were used as models. The scoring key designed for this project can be found in Appendix III. A theoretically perfect score was found for each of the three subscales as well as for the total instrument.

The scores were as follows:

(a) Self = 27

(b) World of Work = 75

(c) Relation between Self and World of Work = 18

(d) Total Theoretically Perfect Score = 120

The scores on the two subscales, Self and Relation of Self to the World of Work, were converted so that the possible maximum score for all three subscales was the same, 75.

The formulas used to convert these scores were:

(a) Self Scores = $\frac{75}{27}$ X original Self score

(b) Relation of Self to World of Work Scores = $\frac{75}{18}$ X original Relation score

The total theoretically perfect score then became 225.

All responses from the pretest and posttest administrations were hand-scored with the use of the scoring key. The scoring was done against a criterion of a theoretically

perfect score rather than the norm of the group, since the instrument used was newly devised and was not standardized for a group.

SECTION III

IMPLEMENTATION OF THE CAREER GUIDANCE PROGRAMME

This section will include the following:

(a) a basic description of the procedure used in the development of the career guidance programme,

(b) programme implementation procedures,

(c) a description of the career guidance programme.

DEVELOPMENT OF THE PROGRAMME

The career guidance programme that was implemented in Mobile Central High School emerged from the criterion of career development for the ninth grade level. The planning of the programme was aimed at achieving the overall objective: to give pupils insight into various occupations and into their own abilities so that they will be able to make a wise choice on their future careers. This was the objective considered to be most important in the Seal Cove Prevocational Project (Reccord, 1973).

As described previously, the criterion of career development was stated in the form of 23 career development objectives, and these 23 objectives are closely related to the Seal Cove Objective stated above. In developing the career guidance programme, then, specific activities were

designed that would most help the students achieve each of the 23 objectives.

In the development of the career guidance programme and the specific activities to be carried out, necessary factors such as time, space, facilities and personnel available were considered. The geographical location of Mobile and the fact that the Mobile students in grade nine had never been exposed to any career guidance activities before were also considered.

The career guidance programme was aimed at being totally exploratory in nature, as advocated by theorists of career development. The programme was planned to (a) try and give all students the opportunity to explore and become aware of themselves; (b) expose the students in a general way to the world of work with all its occupational opportunities; and (c) show the students the importance of relating knowledge of self to knowledge of the world of work.

PROGRAMME IMPLEMENTATION PROCEDURES

Administrative Arrangements

In March, 1974, a meeting was held with all the staff members of Mobile Central High School. They were informed about the project that would be carried out in their school with both classes of grade nine students during the months of April and May. All staff members gave their

approval and felt the career guidance programme should be very beneficial to the students.

Permission was obtained for the required time for student involvement. A two hour time period was required for each class before and after the programme was implemented for purposes of administering the pretest and post-test to both classes. Another two hour period was required in each class for the administrations of the Kuder Interest Inventory. A complete school day was required for each class to be involved in a field trip to St. John's. All other activities in the programme were arranged with teachers to be carried out in regular school periods. Each period was forty minutes in length.

Arrangements were made with the grade nine English teacher to use 5% of the students' final English mark for a student assignment activity in the programme.

Arrangements were made for the individual interviews to be carried out in a private room which was provided by the school administration for use during the programme.

Setting up a Resource Center

A resource center was established in a section of a chemistry room, not in use most of the time. Permission was obtained for the students to use the resource center at any time they so desired. Various types of career information in the form of books, pamphlets, occupational

monographs, tapes and calendars were collected and arranged in such a way that the students could easily locate any specific or general information they needed.

PROGRAMME DESCRIPTION

Students Participating in the Programme

In Mobile Central High School the classes were grouped according to academic ability. As described previously there were two grade nine classes, one called the "brighter" class, the other the "slower" class. Both classes were involved in the programme.

Description of Activities

At the beginning of April, 1974, the pretest was administered to the two grade nine classes in Mobile. During the next two months the students were involved in the various activities of the career guidance programme.

A basic description of these activities, listed in the order they took place, is as follows:

1. Orientation of pupils. During a forty minute period for each class the students were familiarized with the career guidance programme in which they would be involved, were introduced to the resource center, and were shown how to use it.

2. The Career planning process-group guidance. Each class of students was introduced to the career planning

process. The assigning of some short exercises followed by a discussion took place in each class for the purpose of giving the students an understanding of what is involved in sensible and realistic career planning.

3. Aspects of self-group guidance (brainstorming). Students in both classes brainstormed the things that make people different. A discussion followed to help the students differentiate between the essential and the non-essential things that an individual should and should not consider about himself when career planning.

4. Vocational autobiography. Each student was assigned to write a vocational autobiography. A guideline was given for the students to follow but they were encouraged to include any information about themselves they felt was important. The purpose of this assignment was to help the student to assess himself and to get to know himself better.

5. Administration of interest check list. An interest check list was administered to the students. The check list consisted of the ten different interest areas defined in the Kuder Interest Inventory (Form CP). Each interest area on the check list was defined and discussed with the students before they checked their degree of interest in working in any occupations within that area.

The purpose of this activity was as follows: (a) to give the students an understanding of how the various

occupations can be classified into different interest areas; (b) to give the students the opportunity to express what they themselves felt to be their amount of interest for each area; (c) to compare this interest check list with results obtained on the Kuder Interest Inventory and to discuss the comparisons of these results in the individual interview.

6. Administration of interest inventory. The Kuder Interest Inventory (Form CP) was administered to both classes of students and the scoring was done under direction, by the students themselves. A discussion on the interpretation of results followed.

7. Introduction to the world of work--group guidance. A brainstorming session on the reasons why people work took place. A fifteen minute tape from the tape series "A Time for Decision," produced by the Department of Education in Newfoundland, was played. The students reacted to ideas presented on the tape.

8. Becoming acquainted with the whole range of occupations--group guidance. The different job classifications were presented to the students along with the general amount of education and training required for each classification. Students were then asked to relate jobs to their job classifications. Charts of the various job classifications were made and put on the classroom walls by the students.

9. The job family concept--group guidance. The concept of a job family was presented to the students with emphasis placed on the interdependence of jobs. The students explored the different job families for the purpose of understanding how various jobs belonging to a family are related.

10. Oral communications activity. This activity required that the students break into groups of four. Each group had to rank six occupations in order of importance before returning to the regular class to discuss the results. The purpose of this activity was to give an understanding that all the jobs in any job family are important.

11. Field trips to post-secondary institutions in St. John's. The grade nine general class spent a day in St. John's visiting the Trades College and the Fisheries College. The grade nine academic class spent a day visiting the Trades College and Memorial University.

12. Exploration of educational information--group guidance. A discussion took place in each class as a follow-up of the field trips. The discussion centered around training programmes offered in, as well as outside the Province. Students were given a handout containing a summary of educational information.

13. Relating self to the world of work--group guidance. The importance of relating knowledge of self to

knowledge of the world of work was continually emphasized throughout the programme. A discussion took place and the students completed exercises requiring them to relate particular interests, abilities, etc., to particular occupations. Handouts were given to the students on various occupations which were categorized under interest and ability areas.

14. Student assignment--job analysis. Each student was asked to choose two jobs from his (her) two highest interest areas and to do a job analysis on each. These job analyses were scored on a scale of one to five by the writer. The scores obtained by the students were given to the grade nine English teacher to use in totalling the students' final English marks for that year. The students understood that 5% of their final English mark would be used for this assignment.

15. Individual interview. During the programme the writer collected and filed available information about the students. Included were the students' vocational autobiographies, interest check lists, interest inventory results and the job analysis. The individual interview gave the student the opportunity to discuss this information about himself (herself) on an individual basis and to obtain help in understanding how relevant self information should be related realistically to his (her) own career planning.

Table 2 shows a list of these activities, the relationship of these activities to programme objectives (see Appendix I), and the amount of time each activity required for student and counselor.

At the end of May, 1974, with the completion of the career guidance programme, the posttest was administered to both classes of grade nine students.

As can be seen in Table 2, most group guidance sessions were carried out with the total class of students present. In the group guidance sessions it would have been more desirable to work with smaller groups, but this was not feasible because of lack of time and problems with rearranging the class timetable.

Table 2

Career Guidance Activities
Related Objectives
Time Involvement

Activity	Related Objectives (See Appendix I)	Student Time	Counselor Time
1. Orientation of Pupils		1 period	2 periods
2. The Career Planning Process--Group Guidance	2, 3	1 period	4 periods (smaller groups)
3. Aspects of Self--Group Guidance (Brainstorming)	1, 4, 5	1 period	2 periods

Table 2 (continued)

Activity	Related Objectives (See Appendix I)	Student Time	Counselor Time
4. Vocational Autobiography Student Assignment	1, 5	1 period plus student's own time	2 periods
5. Administration of Interest Check List	1, 4, 5	1 period	2 periods
6. Administration of Interest Inventory	5	2 hours	4 hours
7. Introduction to the World of Work--Group Guidance	6, 7	1 period	4 periods (smaller groups)
8. Becoming Acquainted with the Whole Range of Occupations--Group Guidance	8, 9	1 period	2 periods
9. The Job Family Concept--Group Guidance	10, 11, 12	1 period	2 periods
10. Oral Communications Activity		1 period	2 periods
11. Field Trips to Post-Secondary Institutions in St. John's	13, 14, 15, 16	1 day (9:00 a.m. to 4:00 p.m.)	2 days
12. Exploration of Education Information--Group Guidance	13, 14, 15, 16	1 period	2 periods
13. Relating Self to the World of Work	18, 19, 20, 21, 22, 23	1 period	4 periods (smaller groups)
14. Student Assignment Job Analysis	7, 8, 9, 12, 18, 19, 20, 21, 23	Student's own time	4 hours (Correction Time)
15. Individual Interview	All Objectives	15 minutes to ½ hour	20 hours (approximately)

Programme Similarities and Differences for General and Academic Class

The activities carried out in the career guidance programme were basically the same for both the academic and general classes. All students were exposed to the same career information. However, during the programme, emphasis was placed on the importance of career planning being realistic, and on the students relating their own abilities in a realistic manner to occupational planning. In the academic class some group guidance sessions then were centered more around discussions of professional, skilled and managerial occupational clusters, while in the general class discussions tended to center around skilled, unskilled, and some service occupational clusters. This difference in group guidance discussions for the two classes was not deliberately planned but rather emerged during the actual discussions.

Since it was only possible for each class to visit two of the three post-secondary training institutions in St. John's, it was felt by the writer as well as the students that visiting the Trades College and Fisheries College would be more beneficial and realistic for the general class. The academic class was more interested in Memorial University, so that class visited the Trades College as well as the University. However, in a following group guidance class the academic class was exposed to the various programmes

offered at the Fisheries College and the general class was exposed to the programmes offered at Memorial University.

During the programme the writer continually observed whether or not any of the students expressed occupational interests and aspirations that were very unrealistic with their abilities to attain those aspirations. If this was the situation for any student, a discussion was held with that student on an individual basis to help him realize the degree of his own potential and be more realistic in the career planning process.

Time Involvement of Students

As shown in Table 2, eleven class periods (40 minutes each) were used for each class of students. Two hours were used to complete the Kuder Interest Inventory. Seven hours were used for a field trip to St. John's. Fifteen minutes to a half hour was used for the individual interview. Four hours were used in completing the pretest and posttest. Additional time involvement on individual assignments varied for each student.

Total time involvement for students was from 17 to 20 hours per student.

Time Involvement of Counselor

The counselor spent a total of 28 class periods with both classes of grade nine students in the career guidance programme. Four hours were taken to administer the interest

inventories; fourteen hours were used for field trips; eight hours were taken to administer the pretests and post-tests; approximately twenty hours were used in interviewing the students on an individual basis and approximately four hours were spent reading the job analyses done by the students. Additional time involvement for the counselor was spent in preparing group guidance classes, gathering materials, collecting, arranging and reading the various forms of information on the students.

The approximate total time involvement for the counselor was from 65 to 70 hours.

Costs

The only costs required for the programme were for the bus transportation for the field trips to St. John's ($175.00) and for the Kuder Interest Inventories ($60.00). When compared with the total annual student contact time for a full time counselor, the programme would consume approximately 7%.

SECTION IV

ANALYSIS OF DATA

One of the objectives of this project was to evaluate the career guidance programme implemented in Mobile. The evaluation procedure included making comparisons in two basic ways.

1. The results of the career knowledge instrument administered to the grade nine Mobile students before the implementation of the career guidance programme with the results of the same instrument administered to the grade nine Mobile students after the completion of the career guidance programme.
2. The results of the career knowledge instrument administered to the grade nine Mobile students after they had been involved in the career guidance programme with the results of the same instrument administered to a sample of students in the Seal Cove District after they had been involved for a year in the Seal Cove Prevocational Programme.

This section contains an analysis of the data gathered from these pretest and posttest administrations of the career knowledge instrument. The section will be

organized around the eight questions presented in the evaluation procedure described in Section II.

The data for each question will be presented and then discussed.

Question 1a. Was there a significant gain in the mean scores of grade nine students at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument?

Forty-six grade nine students in Mobile Central High School were involved in the pretest administration of the career knowledge instrument, the career guidance programme and the posttest administration of the same instrument.

The results of these pretest and posttest administrations are presented in Table 3. The mean and standard deviation pretest and posttest total scores are given for:

(a) All Mobile students--academics and generals together,

(b) Mobile Academic Class,

(c) Mobile General Class.

For each of these three groups scores are given for each of the three subscales and the total scale. These subscales are abbreviated in the table as follows:

K.S.--the subscale measuring knowledge of Self,

K.W.W.--the subscale measuring knowledge of the World of Work,

Table 3

t-test for Pretest and Posttest Scores for (a) Total Mobile Sample, (b) Mobile Academic Sample, and (c) Mobile General Sample

	Number	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Corr.	t*
(a) Total Mobile Sample	46						
K.S.		27.1	13.5	46.4	15.7	.67	-10.9
K.W.W.		25.9	7.4	54.3	9.7	.49	-21.6
K.R.		21.6	13.1	46.2	11.2	.39	-12.3
Total Scale		74.5	26.5	146.9	29.2	.74	-24.5
(b) Mobile Academic Sample	25						
K.S.		33.7	10.6	53.7	15.8	.57	-7.7
K.W.W.		28.7	6.5	59.6	6.7	.35	-20.5
K.R.		25.8	13.6	51.2	10.5	.49	-10.3
Total Scale		88.2	25.0	164.4	25.0	.67	-18.9
(c) Mobile General Sample	21						
K.S.		19.2	12.5	37.9	10.7	.56	-7.8
K.W.W.		22.6	7.3	48.0	9.1	.33	-12.1
K.R.		16.5	10.8	40.3	9.2	-0.12	-7.3
Total Scale		58.2	17.9	126.1	18.2	.42	-16.0

*$p < .05$.

K.R.--the subscale measuring the Related Knowledge between Self and the World of Work.

A t-test carried out for all subscales resulted in the rejection of the null hypothesis for all the subscales. There was a significant gain in the mean scores of grade nine students at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument. A comparison of the means of all subscales shows that the students did almost twice as well on the posttest administration of the career knowledge instrument as they had done on the pretest administration of the same instrument.

Question 1b. Was there a significant gain in the mean scores of grade nine students in the academic class at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument?

Twenty-five students from the academic class in Mobile were involved in the pretest administration of the career knowledge instrument, the career guidance programme and the posttest administration of the same instrument. See Table 3 for a presentation of the results of these pretest and posttest administrations.

A t-test carried out for all subscales resulted in the rejection of the null hypothesis. There was a significant gain in the mean scores of grade nine students in the

academic class at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument. A comparison of the means of all subscales shows that for the total scale, the World of Work subscale, and the Relation between Self and the World of Work subscale the academic students did about twice as well on the posttest administration of the career knowledge instrument as they had done on the pretest administration of the same instrument. However, the gain on the Self subscale, although significant, was not quite as high.

Question 1c. Was there a significant gain in the mean scores of grade nine students in the general class at Mobile Central High School from the pretest to the posttest administrations of the career knowledge instrument?

Twenty-one students from the general class in Mobile were involved in the pretest administration of the career knowledge instrument, the career guidance programme, and the posttest administration of the same instrument. See Table 3 for a presentation of the results of these pretest and posttest administrations.

A t-test carried out for all subscales resulted in the rejection of the null hypothesis. There was a significant gain in the mean scores of grade nine students in the general class at Mobile Central High School from the pretest to the posttest administrations of the career knowledge

instrument. A comparison of the means of all subscales shows that the general students did twice as well on the posttest administration of the career knowledge instrument as they did on the pretest administration of the same instrument.

Question 1d. Was there a significant difference in the mean scores of grade nine students in the academic class and grade nine students in the general class at Mobile Central High School on the posttest administration of the career knowledge instrument after correcting for the mean scores of both classes on the pretest administration?

This question would normally be analyzed using an analysis of covariance (ANCOVA) procedure. Table 3 shows the correlations of pretest scores with posttest scores for all the subscales in each academic level. With one exception, the correlations in the academic group were about the same as the general group and were greater than zero. On the Relation between Self and the World of Work subscale, however, the correlation in the academic group was considerably larger than that in the general group. This difference in correlation indicated that the assumption of homogeneity of regression required in ANCOVA would be violated, and contra indicated the use of the procedure. The procedure adopted instead was a t-test of the mean difference in gain scores.

The results of the t-test, presented in Table 4, show that for the subscales Self and Relation of Self to the World of Work and for the total scale there were no significant differences in the mean scores of grade nine students in the academic class and grade nine students in the general class at Mobile Central High School on the post-test administration of the career knowledge instrument after correcting for the mean scores of both classes on the pre-test administration. However, for the subscale World of Work there was a significant difference in the posttest mean scores after correcting for the World of Work pretest mean scores.

Question 2a. Was there a significant difference in mean scores of grade nine students in Mobile Central High School and grade nine students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

Fifty-three students in Mobile were involved in the career guidance programme and the posttest administration of the career knowledge instrument. One hundred and fifty students in the Seal Cove Prevocational District were involved in the Seal Cove Prevocational project and the posttest administration of the same instrument.

The results of these posttest administrations are presented in Table 5.

Table 4

T-test of Mean Difference in Gain Scores for the Mobile Academic Sample and the Mobile General Sample

Subscale	Number	Mean Gain	S.D.	T
K.S. Gain				
Academic Sample	25	20.8	12.6	.62
General Sample	21	18.7	11.0	
K.W.W. Gain				
Academic Sample	25	30.9	7.5	2.13*
General Sample	21	25.4	9.6	
K.R. Gain				
Academic Sample	25	25.3	12.4	.37
General Sample	21	23.8	15.0	
Total Gain				
Academic Sample	25	76.2	20.1	1.43
General Sample	21	67.9	19.5	

*$p < .05$

Table 5

Posttest Mean Scores for the Mobile Sample and the Seal Cove Sample

	Number	Mobile		Seal Cove	
		Mean	S.D.	Mean	S.D.
Entire Sample	203 (Seal Cove-150) (Mobile-53)				
K.S.		47.1	15.4	25.0	11.7
K.W.W.		54.5	9.7	25.8	8.0
K.R.		46.6	11.4	24.2	12.2
Total Scale		148.2	29.1	74.9	24.9
Academic Sample	114 (Seal Cove-85) (Mobile-29)				
K.S.		54.0	15.5	27.8	11.2
K.W.W.		59.3	7.3	28.2	7.1
K.R.		51.6	10.0	27.8	11.4
Total Scale		164.9	25.3	83.8	21.5
General Sample	89 (Seal Cove-65) (Mobile-24)				
K.S.		38.7	10.4	21.2	11.4
K.W.W.		48.7	9.1	22.6	8.1
K.R.		40.6	10.1	19.4	11.8
Total Scale		128.0	18.8	63.3	24.4

The mean and standard deviation posttest scores are given for each subscale and the total scale for:

(a) Mobile Students (Academics and Generals)

(b) Seal Cove Students (Academics and Generals)

(c) Mobile Academic Students

(d) Seal Cove Academic Students

(e) Mobile General Students

(f) Seal Cove General Students

The analysis of variance which was carried out for all subscales (see Table 6) resulted in the rejection of the null hypothesis. There was a significant difference in the mean scores of grade nine students in Mobile Central High School and grade nine students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument. A comparison of means for all subscales shows that the Mobile students scored significantly higher than the Seal Cove students on the posttest administration of the career knowledge instrument.

Question 2b. Was there a significant difference in mean scores of grade nine academic students in Mobile Central High School and the grade nine academic students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

Table 6

ANOVA for Treatment by Class Level of Posttest Scores
for the Mobile Sample and the Seal Cove Sample

Source	D.F.	S.S.	F
K.S.			
Treatment	1	5316.6	37.8*
Level	1	1607.1	11.4*
2-way Interactions (Treatment by Level)	1	742.5	5.3*
Error	199	28012.5	
K.W.W.			
Treatment	1	11919.8	200.3*
Level	1	1137.6	19.1*
2-way Interactions (Treatment by Level)	1	246.4	4.1*
Error	199	11843.1	
K.R.			
Treatment	1	7891.5	63.1*
Level	1	2584.6	20.7*
2-way Interactions (Treatment by Level)	1	63.9	0.5
Error	199	24892.1	

Table 6 (continued)

Source	D.F.	S.S.	F
Total			
Treatment	1	73353.6	141.9*
Level	1	15523.4	30.0*
2-way Interactions (Treatment by Level)	1	2604.3	5.0*
Error	199	102905.7	

*p < .05.

Twenty-nine students from the academic class in Mobile were involved in the career guidance programme and the posttest administration of the career knowledge instrument. Eighty-five students from academic classes in the Seal Cove Prevocational District were involved in the Seal Cove Prevocational programme and the posttest administration of the same instrument. See Table 5 for the mean and standard deviation posttest scores for all subscales for these academic students.

The analysis of variance carried out (see Table 6) resulted in the rejection of the null hypothesis. There was a significant difference in mean scores of grade nine academic students in Mobile Central High School and the grade nine academic students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument. A comparison of means for all subscales shows that the Mobile academic students scored significantly higher than the Seal Cove academic students on the posttest administration of the career knowledge instrument.

Question 2c. Was there a significant difference in mean scores of the grade nine general students in Mobile Central High School and the grade nine general students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

Twenty-four students from the general class in Mobile were involved in the career guidance programme and the posttest administration of the career knowledge instrument. Sixty-five students from the general classes in the Seal Cove Prevocational District were involved in the Seal Cove Prevocational programme and the posttest administration of the same instrument. See Table 5 for the mean and standard deviation posttest scores for all subscales for these general students.

The analysis of variance carried out (see Table 6) resulted in the rejection of the null hypothesis. There was a significant difference in mean scores of the grade nine general students in Mobile Central High School and the grade nine general students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument. A comparison of means for all subscales shows that the Mobile general students scored significantly higher than the Seal Cove general students on the posttest administration of the career knowledge instrument.

Question 2d. Was there a significant difference in the mean scores of grade nine general class in Mobile Central High School, the grade nine academic class in Mobile Central High School, the grade nine general class in the Seal Cove Prevocational District and the grade nine

academic class in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument?

The analysis of variance carried out for Question 2a (see Table 6) showed that there was a significant difference in the mean scores of grade nine students in Mobile Central High School and grade nine students in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument. For Questions 2b and 2c the analysis of variance showed that there was a significant difference in the mean scores of grade nine general class in Mobile Central High School, the grade nine academic class in Mobile Central High School, the grade nine general class in the Seal Cove Prevocational District and the grade nine academic class in the Seal Cove Prevocational District on the posttest administration of the career knowledge instrument. That is, class level was a significant main effect in the analysis.

The remaining question is: Did class levels score significantly different on the posttest depending on the treatment?

The analysis of variance carried out for this interaction, treatment by level (see Table 6), showed that for the subscales Knowledge of Self, and Knowledge of the World of Work, and for the total scale, there was a significant difference in posttest mean scores for the class levels

depending on the treatment. The analysis of variance showed no significant difference for the subscale Knowledge of Relating Self to the World of Work. These results are shown graphically in Figures 1, 2, 3, and 4.

The graphs illustrate that on the Knowledge of Self, World of Work and Total scales, the difference between the Mobile academic and general scores was greater than the same difference in Seal Cove. This difference was not observed for the Related Knowledge between Self and the World of Work subscale.

Summary

The analysis of data presented in this section showed that for both the grade nine academic class and the grade nine general class in Mobile, there was a significant gain in their mean scores from the pretest to the posttest administration of the career knowledge instrument.

On the posttest administration of the career knowledge instrument the mean scores of the Mobile students were significantly higher than those scores of the students in the Seal Cove Prevocational District.

In both Mobile and the Seal Cove Prevocational District the mean scores of academic students were higher than those scores of the general students. However, the variance of mean scores between the academic and general students in Mobile was greater than the variance between the academic and general students in the Seal Cove Prevocational District.

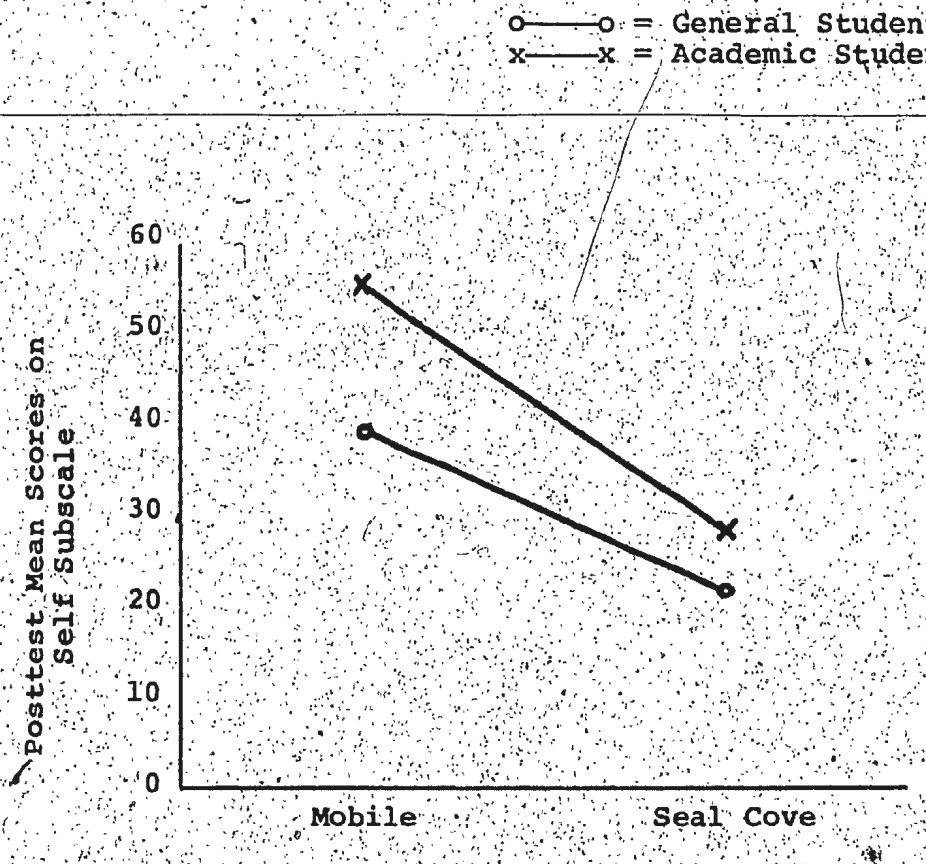


Figure 1. Interaction of treatment by level on the Self subscale.

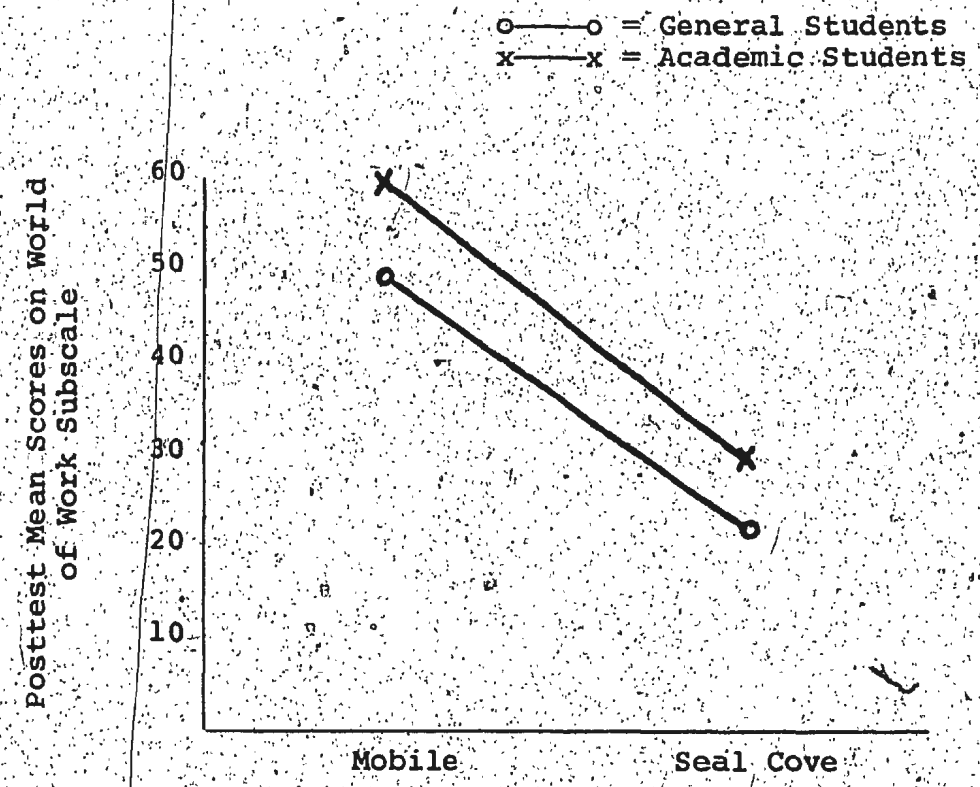


Figure 2. Interaction of treatment by level on the World of Work subscale.

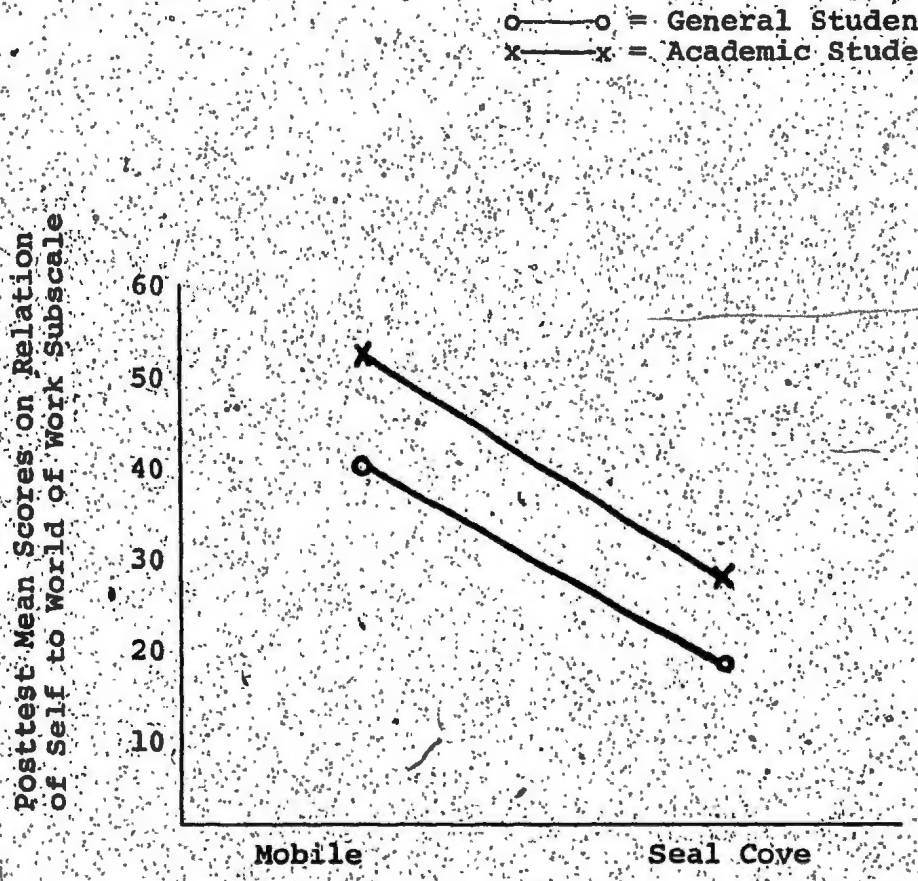


Figure 3. Interaction of treatment by level on the Relation between Self and the World of Work subscale.

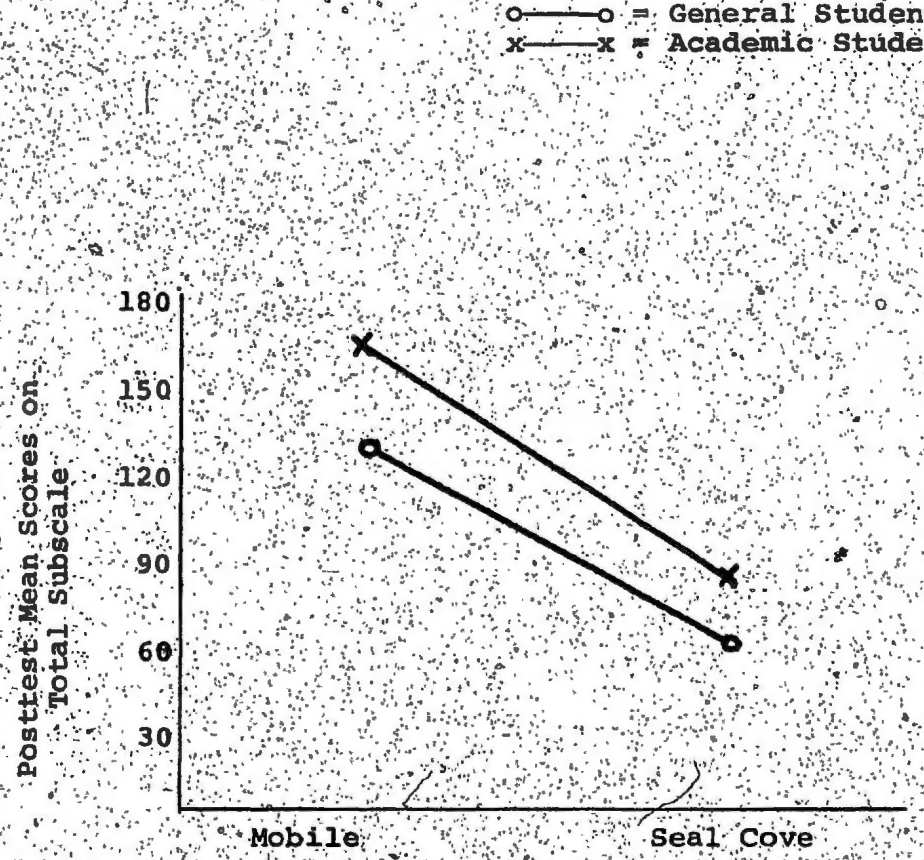


Figure 4. Interaction of treatment by level on the total scale.

SECTION V

OBSERVATIONS, CONCLUSIONS AND RECOMMENDATIONS

The first part of this section will be organized around the following two main questions:

1. Was the career guidance programme implemented in Mobile effective?
2. How did the career guidance programme implemented in Mobile compare with the Seal Cove Prevocational Programme in meeting objective two of the Seal Cove Programme?

Based on the review of literature of career development found in Section I, the collection of data and the results which were presented in Section IV, these two questions will be discussed. Appropriate conclusions and observations will be made concerning the career guidance programme and the project itself.

The latter part of this section will consist of recommendations which arose after the completion of this project.

OBSERVATIONS AND CONCLUSIONS

Consideration of Question 1

Was the career guidance programme implemented in Mobile effective?

The basic purpose of this project was to develop and implement a career guidance programme at the grade nine level in Mobile Central High School. The programme was evaluated by pretest and posttest administrations of a career knowledge instrument to those Mobile grade nine students who were involved in the career guidance programme.

Based on the analysis of data presented in Section IV, the grade nine Mobile academic and general students' career knowledge in the areas of Self, World of Work, and the Relation of Self to the World of Work, as measured by the instrument, increased significantly after they were involved in the career guidance programme. The increases which were observed were so large that it seems unlikely that over a two month period any factors, conditions or variables, other than the career guidance programme, could have existed to cause this significant increase in career knowledge. Therefore, the career guidance programme was effective in that it produced a significant and desirable gain in career knowledge for all the grade nine Mobile students.

In concluding, then, that the career guidance programme was effective, two important questions follow:

1a. How effective was the career guidance programme for the Mobile students in achieving the desirable level or criterion of career development set forth for ninth graders?

1b. Was the career guidance programme in Mobile more effective for either the academic or general students?

Consideration of Question 1a. As described previously in Section II, an instrument was devised to measure the degree of attainment of this criterion which was stated in the form of desirable objectives. The results of this study showed that the mean score on the posttest administration of the career knowledge instrument for the Mobile academic class was 164, and for the Mobile general class it was 126. The theoretically perfect score was 225.

Basing this theoretically perfect score on 100%, the academic class achieved 73% of this perfect score and the general class achieved 56%.

An explanation for the students not attaining scores closer to the theoretically perfect score is that the grade nine students in Mobile had never been exposed to any career guidance. Therefore the six week period of the study may not have been sufficient to reach the desirable level of career development with all students, and especially with those in the "slower" class.

The career guidance programme may have been more effective in helping the students attain the desirable level of career development if more activities of an exploratory nature could have been carried out in which the students could work more independently. Ideally, in grade nine the student would be involved in a more independent exploration of career clusters related to his own areas of interests and abilities. However, the grade nine students in Mobile had no prior background in career guidance and therefore much of the group oriented activities was directed toward making up this background. The programme at Mobile had less independent work then because of lack of time, and outcomes were not as high as possibly they might have been.

Consideration of Question 1b. If the Mobile academic class attained 73% of the theoretically perfect score after the completion of the career guidance programme, and the Mobile general class only 56%, does this imply that the programme was more effective for the academic class than for the general class?

The results presented in Table 4 show that this was not the situation. These results showed that the differences in posttest mean scores between the Mobile academic class and the Mobile general class for the subscales of Self and Relation of Self to the World of Work and for the total scale had already existed in the pretest results, and

therefore, posttest differences were due primarily to a student's status before the programme began. Suggested reasons for these pretest differences are as follows:

First, the two classes were divided according to academic ability and therefore one would expect the class of "brighter" students to score higher on an instrument requiring the acquisition of knowledge in any area; for example, the area of career planning.

Second, the general intelligence for both classes of students was most likely an influencing factor, and it could be anticipated that measured intelligence in the general class would be lower than in the academic class.

Third, the reading level of the academic class was probably higher than the reading level of the general class (half of this class were receiving extra remedial help).

Fourth, the academic class possibly had a better general understanding of some concepts tested, and was more likely to do well in a test situation.

Finally, all the students in the academic class indicated that they planned to finish high school and continue their education. Very few from the general class had similar plans. Therefore, before the students were exposed to the career guidance programme the academic class had already probably given more serious thought to their career planning, and had probably been more motivated on their own to seek career related information than the students in the

general class. For many students in the general class their goal was not to finish high school but to get a job whenever they could in a garage, fish plant, or as a full-time babysitter around their own homes. It is less likely that these students would have developed broad career knowledge prior to a career guidance programme.

In considering the differences in mean scores between the academic and general class, the following important and interesting observations were made.

1. The greatest difference in the pretest mean scores between the Mobile academic class and the Mobile general class was on the subscale of Self. This subscale of the instrument measures a basic knowledge of the career planning process for the grade nine level, an understanding of the terms interest and ability, and the student's awareness of his own unique interests and abilities. In addition to the reasons previously suggested for the higher scores obtained by the academic class, another possible explanation for this difference could be that the students in the academic class had more positive self-concepts than the students in the general class. Perhaps the academic students already had more insight into their own abilities and interests than the general students. Further research is necessary to draw any conclusions about this particular difference in pretest mean scores on the Self subscale between academic and general students.

2. In relation to the first observations made, it is interesting to note that almost the same difference existed between the Mobile academic and general class on the posttest mean scores of the Self subscale as on the pretest mean scores of the same subscale. The data analysis showed that this difference was not significant after correcting for the difference on the pretest. This indicates, then, that both groups of students had an almost equal gain from pretest to posttest on the Self subscale.

If one considers the fact that the academic class started with a higher score on pretest Self (14.5 points higher than the general class), one would expect that after being exposed to the career guidance programme the "brighter" class would accelerate faster, learn more, gain more insight, and thus gain more from this aspect of the programme than the general class. This apparently was not the case on the Self subscale. In fact, even though the gain was about the same for both groups, the Self posttest score for the general class doubled from the Self pretest score, whereas this was not the case for the academic class. One explanation for this could be that the academic class already had a higher score on the Self subscale on the pretest and for their score to double on the posttest they would have to gain more from the programme than they realistically could. In other words, some of what the general class gained from the

career guidance programme in the area of Self, the academic class had already gained on their own before being exposed to the programme. Perhaps this aspect of the programme on self, helped the general students to have more insight into themselves and become more aware of their own existing interests and abilities. In summary, even though the academic class was "brighter" than the general class, the gains were about equal for both classes on the Self subscale, with both classes being exposed to the same treatment.

3. The analysis of data in Section IV showed that there was a significant difference in the gains from the pretest to the posttest for the Mobile acadmic and general class on the World of Work subscale. These results indicate that the academic class gained significantly more knowledge about the world of work than the general class from the career guidance programme. One possible explanation for this was that the World of Work subscale was the largest subscale of the instrument. This subscale contained 29 of the total 50 questions. These questions measured the students' acquired knowledge of the world of work. The career guidance programme exposed the students to broad occupational and educational information. To absorb the information exposed to them required learning skills. One could say, then, that the World of Work subscale was more 'academic' in nature. This being the case, one would have expected the academic students to gain more World of Work

knowledge and general information than the general students from the career guidance programme. However, it should be remembered that the general class, in itself, had a significant gain on the World of Work subscale from pretest to posttest.

4. The difference in correlations presented in Table 3, Section IV, between the Mobile academic and general class on the subscale Relation of Self to the World of Work indicates that the posttest scores on this subscale were not predictable from the pretest scores for the general students, whereas the posttest scores were predictable from pretest scores for the academic class.

Something, then, happened during the programmes which affected the general students in the career guidance programme differently than the academic students for the subscale Relation of Self to the World of Work. Both groups experienced a significant gain on this scale, but for the academic students, the size of the individual gains was predictable from the pretest scores. The size of the gain of the general students was not predictable from the pretest score. The results showed that the general students gained relatively greater on the Self subscale, but that their pretest scores were quite low relative to the academic students' scores.

Maybe, then, the academics were initially more realistic about relating Self to World of Work, in virtue

of their better self-knowledge. As the general students became more knowledgeable about Self, and consequently better able to relate Self and World of Work, perhaps the realism of the process improved as well, but in a much more variable way. If the relating of Self to World of Work component reflected the realism of the student, and if the programme helped to develop realistic patterns of self-knowledge, then the low pretest-posttest correlations for the general students on the Relation of Self to World of Work subscale could be expected.

Overall Conclusion for Question 1

The basic career guidance programme implemented in Mobile in a general and academic class was effective for both classes. The programme caused a significant increase in career knowledge in the areas of (a) Self, (b) World of Work, and (c) Relation of Self to the World of Work for the general as well as the academic class.

Consideration of Question 2

How did the career guidance programme implemented in Mobile compare with the Seal Cove Prevocational Programme in meeting objective two of the Seal Cove Programme?

The evaluation procedure carried out in this project involved the comparison of the results of posttest administrations of a career knowledge instrument to grade nine students in Mobile who had been involved in a career

guidance programme and grade nine students in the Seal Cove Prevocational District who had been involved in the Seal Cove Prevocational Programme.

The results of these posttest administrations presented in Section IV showed that the Mobile students scored significantly higher on all subscales than did the Seal Cove students.

This indicates that at the time of the posttest administration the Mobile general and academic students' acquired amount of career knowledge, as measured by the career knowledge instrument, was significantly higher than the knowledge of the Seal Cove general and academic students.

Can it be concluded then that the career guidance programme implemented in Mobile was more effective than the Seal Cove Prevocational Programme in achieving objective two defined for the Seal Cove Programme?

Seal Cove objective two, to give pupils insight into various occupations and into their own abilities so that they will be able to make a wise choice on their future career, was viewed in Seal Cove as the priority in objectives for the Prevocational Programme (Reccord, 1973).

In Newfoundland the making of an initial career choice usually takes place when the students are in Grade XI. If the Prevocational Programme is to aid students to make this career choice a wise one, then it is necessary that the programme first expose the students to a wide

variety of career knowledge. A wise career choice implies a realistic, sensible career choice, and it implies choosing a career that is suited to an individual's particular interests, abilities, values, and personality.

Such a wise career choice can only be made, then, after an individual has acquired knowledge and become aware of himself and the world of work, and can accurately appraise the relationship between the two.

The degree of this general career knowledge for grade nine students, after being involved in the Seal Cove Prevocational Programme for one year, as measured by the career knowledge instrument, was minimal.

The posttest total mean score for these Seal Cove students was 75; which is one third of the theoretically perfect score (225) for the criterion of career development at the ninth grade level.

In fact, this posttest mean score for the Seal Cove students was only four points higher than the pretest mean score (71) for the Mobile students.

This slight difference indicates that the Seal Cove Prevocational Programme does not appear to be achieving its main objective as well as did the career guidance programme for this project. If the Seal Cove programme was meeting this objective then the degree of career knowledge of the students involved after one year should have been significantly higher than the degree of career knowledge of the

Mobile students--as measured by the pretest at a time when these students had never been exposed to any types of career related activities.

Observations. The posttest results for Mobile and Seal Cove showed that the differences between the Mobile academic and general students were greater than the differences between the Seal Cove academic and general students. Possible explanations for this smaller variance of scores between class levels in Seal Cove than in Mobile are as follows:

1. Perhaps the degree of variance between Seal Cove academic and general students was not effected by the Pre-vocational Programme. This would occur if the Seal Cove Programme worked equally well with both groups of students. The cause then could be any of the following:

First, there may be a difference in the school programmes offered in Mobile and in the three high schools in the Conception Bay area. Perhaps in the Mobile school there is more emphasis on academic skills, thus causing the academic students there to be on a much higher academic level than the general students. This may not be the case in the Conception Bay schools.

Second, there may be a greater variance in general intelligence and reading level between the Mobile academic and general students than there is between the Conception Bay general and academic students.

Third, the sample used in this project from the Seal Cove Prevocational District may explain the variance differences. The Mobile sample consisted of all the grade nine students in Mobile Central High School. Therefore, the Mobile sample included the brightest and slowest students from the Mobile School District, and one would expect a wide score range among these students. The sample from the Seal Cove Prevocational District consisted of 150 of the approximately 400 grade nine students, and therefore may not have included the slowest and/or the brightest students in the district. Special education students in the Seal Cove Prevocational District were not included in the sample. Thus, one would expect score ranges to be smaller for the Seal Cove sample than for the Mobile sample.

2. If the degree of variance between class levels in the Conception Bay area was greater before participation in the Seal Cove Prevocational Programme, then perhaps the Prevocational Programme was the cause for the smaller variance. If this were the case, then it could be said that general students gained more career knowledge than the academic students from the Prevocational Programme. Further discussion on this would require further research data.

Overall Conclusion for Question 2

The career guidance programme implemented in Mobile was more effective than the Seal Cove Prevocational Programme

in achieving the career educative objective two of the Seal Cove Programme, as measured by the career knowledge instrument.

RECOMMENDATIONS

Specifically, this project aimed to determine the effectiveness of a career guidance programme which was implemented as an alternative for the Seal Cove Prevocational Programme in achieving the career educative objective two of the Prevocational Programme.

The results of this project suggest the following recommendations.

General Recommendations

1. Guidance counselors and administrators should place emphasis on the implementation of career guidance programmes in general and academic classes in the school systems.
2. The Seal Cove Prevocational Programme should be studied in its efforts in achieving the career educative objective, listed as the priority of objectives.
3. The Department of Education and School Boards should consider hiring guidance personnel to provide general career guidance to all students in the Prevocational Programme.
4. Career guidance should begin in the elementary school for students to reach a desirable level of career

development when they are in high school. Grade nine is definitely too late for career guidance for "slower" students. By grade nine most of these students have no ambition but to drop out of school.

Recommendations for Further Research

1. Career guidance programmes should be implemented and evaluated in other grade levels in Newfoundland.
2. A career guidance programme should be implemented and evaluated with grade nine students who have had previous exposure to career guidance.
3. A career guidance programme should be implemented at the grade nine level and evaluated against a control group not involved in a Prevocational Programme.
4. Research should be carried out involving the administrations of a pretest and posttest to the students involved in the Seal Cove Prevocational Programme to determine the effect of the Programme on both academic and general students on career development.
5. Research should be carried out to determine why the scores for the general and academic students in the Seal Cove Prevocational District were much less varied than those for the academic and general students in Mobile.
6. Research should be carried out to determine the effect of a career guidance programme on general students in

their relating self knowledge to world of work knowledge.

7. Research should be carried out to determine the reason for the large difference on the Self subscale existing on the pretest between the Mobile academic and general students. The research should consider this difference being related to differences in self-concept between academic and general students.

8. Research should be carried out with students participating in both a Prevocational Programme and a related career guidance programme to determine their level of career development.

9. The career knowledge instrument should be studied to determine the dimensions that it actually measures. In particular, it should be validated against measures of realism of decision choices.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. BOOKS

Baer, M.F., & Roeber, E.C. Occupational Information: the Dynamics of its Nature and Use. Chicago: Science Research Associates, 1964.

Bailey, L.J., & Stadt, R.W. Career Education: New Approaches to Human Development. Illinois: McKnight Publishing Company, 1973.

Breton, R., & McDonald, J.C. Career Decisions of Canadian Youth: A Compilation of Basic Data. Ottawa, Ontario: Queen's Printer, 1967.

Buehler, C. Der menschliche Lebenslauf als psychologisches Problem. Leipzig: Hirzel, 1933.

Drier, H.N. K-12 Guide for Integrating Career Development into Local Curriculum. Ohio: Charles A. Jones Publishing Company, 1972.

Evans, N.E., Hoyt, K.B., & Mangum, G.L. Career Education in the Middle/Junior High School. Salt Lake City, Utah: Olympus Publishing Company, 1973.

Ginzberg, E., Ginsberg, S.W., Axelrad, S., & Herma, J.L. Occupational Choice: An Approach to a General Theory. New York: Columbia University Press, 1951.

Gribbons, W.D., & Lohnes, P.R. Emerging Careers. New York: Teachers College, Columbia University, 1968.

Hansen, L.S. Career Guidance Practices in School and Community. Washington, D.C.: National Vocational Guidance Association, 1969.

Havighurst, R.J. Human Development and Education. New York: Longmans, 1953.

Herr, E.L., & Cramer, S.H. Vocational Guidance and Career Development in the Schools: Toward a Systems Approach. Boston: Houghton Mifflin Co., 1972.

Hoppock, R. Occupational Information: Where to Get it and How to Use it. New York: McGraw-Hill, 1967.

Hopson, B., & Hayes, J. The Theory and Practice of Vocational Guidance. New York: Pergamon Press, Ltd., 1968.

Howard, A.W., & Stoumbis, G.C. Schools for the Middle Years: Readings. Pennsylvania: International Textbook Company, 1969.

Hoyt, K.B., Evans, R.N., Mackin, E.F., & Mangum, G.L. Career Education: What It Is and How to Do It. (2nd. ed.). Salt Lake City, Utah: Olympus Publishing Company, 1972.

Osipow, S.H. Theories of Career Development. New York: Appleton-Century-Crofts, Division of Meredith Corporation, 1968.

Pautler, A.J., & Roeder, J.A. Selected Readings in Career Education. New York: MSS Information Corporation, 1973.

Rogers, C.R. Client Centered Therapy. Boston: Houghton Mifflin, 1951.

Snygg, D., & Combs, A.W. Individual Behavior: A New Frame of Reference for Psychology. New York: Harper, 1949.

Schertzer, B. Teacher's Guide to Group Vocational Guidance. Cambridge, Massachusetts: Bellman Publishing Company, 1971.

Stanley, C., & Hopkins, K.D. Educational and Psychological Measurement and Evaluation. New Jersey: Prentice-Hall, Inc., 1972.

Stevenson, J.B. An Introduction to Career Education. Ohio: Charles A. Jones Publishing Company, 1973.

Super, D.E., & Overstreet, P.L. The Vocational Maturity of Ninth-Grade Boys. New York: Teachers College, Columbia University, 1960.

Super, D.E., Starishevsky, R., Matlin, N., & Jordaan, J.P. Career Development: Self-Concept Theory. Princeton, N.Y.: College Entrance Examination Board, 1963.

Williamson, E.G. Counseling Adolescents. New York: McGraw-Hill, 1950.

B. ARTICLES

American Vocational Association Task Force Report on Career Education. Staff Report. American Vocational Journal. Jan. 1972, Vol. 47, No. 1, pp. 12-14.

Bedal, C.L. The Renaissance of Vocational Guidance, Canadian Counsellor. Oct. 1969, Vol. 3, No. 4, pp. 26-33.

Form, W.H., & Miller, D.C. Occupational Career Pattern as a Sociological Instrument. American Journal of Sociology. 1949, Vol. 54, pp. 317-329.

Gambino, T.W. Junior High: The Exploratory Years, American Vocational Journal. March 1972, Vol. 47, No. 3, pp. 56-57.

Gibson, R.L. Pupil Opinions of High School Guidance Programs, Personnel and Guidance Journal. 1962, Vol. 40, pp. 453-457.

Herr, E.S. Contributions of Career Development to Career Education, Journal of Industrial Teacher Education. Spring 1972, Vol. 9, No. 3, pp. 5-14.

Johnson, A.H. The Responses of High School Seniors to a Set of Structured Situations Concerning Teaching as a Career, Dissertation Abstracts. 1957, Vol. 17, pp. 815-816.

Marland, S.P. Career Education, Today's Education. Oct. 1971, Vol. 60, No. 7, pp. 22-25.

Martin, M.Y. Advancing Career Education, American Education. Aug.-Sept. 1972, pp. 25-30.

Matheny, K.B. The Role of the Middle School in Career Development, American Vocational Journal. Dec. 1969, Vol. 44, No. 9, pp. 18-21.

Slocum, W.L. Attractiveness of Occupations to High School Students, Personnel and Guidance Journal. 1967, Vol. 46, pp. 754-776.

Super, D.E. A Theory of Vocational Development, American Psychologist. May 1953, Vol. 8, No. 4, pp. 185-190.

Walton, L.E. The Scope and Function of Vocational Guidance, Educational Outlook. May 1957, Vol. 31, No. 4, pp. 119-128.

Wenrich, R.C. Is Your District Neglecting Most of its Students? School Management. July 1971, Vol. 15, pp. 27-29.

C. UNPUBLISHED MATERIAL

Fitch, R.M. Vocational Level of Aspiration in Selected High School Work Experience Programs. Doctoral Dissertation, University of California, 1960.

Hicks, B.E. The Preparation of Instructional Materials for Orientation of Grade VIII Students to the Conception Bay South Prevocational Courses. Master's Thesis, Memorial University of Newfoundland, 1973.

Prevocational Pilot Project Planning Committee, Seal Cove Prevocational Pilot Project, 1971.

Reccord, R. The Seal Cove District Vocational School Pilot Project in Prevocational Education: An Evaluation of the First Year of Operation. Master's Thesis, Memorial University of Newfoundland, 1973.

Task Force on the Integration of Academic and Vocational Education. Interim Report for Hon. Dr. F.W. Rowe, Minister of Education and Youth, Government of Newfoundland and Labrador, 1971.

Turpin, E.F. Implementation of a Junior High School Program in Conjunction with a District Vocational School Program. Master's Thesis, Memorial University of Newfoundland, 1972.

D. REPORTS

Committee of 1973 Enrollment, Memorial University of Newfoundland. Career Decisions of Newfoundland Youth. Memorial University of Newfoundland, 1974.

Gallup Polls, Attitudes towards Education 1969-73. Ed. Stanley Elam. Bloomington, Indiana: Phi Delta Kappa, 1973.

Purdue Opinion Polls, Counselling Needs of High School Students. Indiana: Measurement and Research Center, Purdue University, 1968.

Report of the Royal Commission on Education and Youth, Province of Newfoundland and Labrador, Vol. 1-2, 1967-1968.

APPENDIX I

CAREER DEVELOPMENT OBJECTIVES FOR NINTH GRADE LEVEL

APPENDIX I

CAREER DEVELOPMENT OBJECTIVES FOR NINTH GRADE LEVEL

1. The student should realize he (she) is a unique individual; he should be able to list the things that make him different from the rest of his classmates.

2. The student should realize and be able to state the importance of planning for a career while in grade nine.

3. The student should be able to list the appropriate steps to take in choosing a career.

4. The student should be able to differentiate between interest and ability by correctly stating what it means to have interest in a job and the ability for a job.

5. The student should be able to list his own interests and abilities and state reasons for knowing why these are his interests and abilities.

6. The student should be able to state the approximate number of jobs that exist today.

7. The student should be able to list the different reasons for which people work.

8. The student should be acquainted with the whole range of occupations; i.e. he should be able to match any job with its appropriate job classification.

9. For each job classification the student should be able to identify the general amount of education and training

required for the jobs within that classification.

10. The student should understand the concept of a job family; he should be able to state what a job family is.

11. The student should understand and be able to state the advantage of thinking about a job family rather than a single job.

12. The student should be able to name a job family of interest to him and be able to list specific jobs included in that family.

13. The student should be aware of the opportunities in post high school education that exist for him in the Province of Newfoundland.

14. The student should be able to list the educational and training requirements for the various programmes and trades offered at these post high school training institutions.

15. The student should be able to state the approximate cost involved for a year at these training institutions.

16. The student should be aware of the possibility of obtaining loans and allowances.

17. The student should be able to select any job of interest to him and be able to do a detailed job analysis.

18. The student should realize and be able to state the importance of relating occupations to both interests and abilities.

19. The student should be able to state what careers are suitable for him if he likes mainly to work with ideas, things, and for people.

20. The student should be able to relate interest areas to careers.

21. The student should be able to relate school subjects to careers.

22. The student should realize and be able to state how mental ability is related to choosing a career.

23. The student should realize how personality is related to career planning; he should be able to list the personality requirements for a career which would be suitable for him.

APPENDIX II

CAREER KNOWLEDGE INSTRUMENT

APPENDIX II

CAREER KNOWLEDGE INSTRUMENT

Student's Name _____

Student's Age _____

Father's Occupation _____

Where do you live? _____

Do you think you will drop out of school in June? _____

Do you think you will finish grade eleven? _____

Do you think you will go on to university or college if you finish school? _____

1. List the things that make you different from the rest of your classmates.

2. Why is it important for you to be planning now for a career?

3. What is the best way to go about choosing a career?

4. In one sentence state what it means to have interest in a job.

5. In one sentence state what it means to have the ability for a job.

6. List your interests.

7. Which two of your interests do you feel most sure of?

8. Why do you feel sure of these two interests?

9. List your abilities.

10. How do you know these are your abilities?

_____

_____

11. About how many different jobs exist today? _____

12. Why do people work at a job?

_____

_____

13. In the blank before each job put in the letter for the job classification in which that job would best fit.

	JOB	JOB CLASSIFICATION
Example	e fireman	(a) Professional Occupations
	___ typist	(b) Administrative Occupations
	___ auto mechanic	(c) Office Occupations
	___ R.C.M.P. officer	(d) Selling Occupations
	___ engineer	(e) Service Occupations (Domestic, Personal, or Protective)
	___ real estate agent	
	___ airline hostess	(f) Skilled Occupations
	___ store manager	(g) Unskilled Occupations
	___ teacher	
	___ insurance agent	
	___ candy packer	
	___ maid or butler	
	___ file clerk	
	___ electrician	
	___ ditch digger	
	___ doctor or nurse	
	___ carpenter	

For numbers 14, 15, and 16, circle the letter that stands for the correct answer.

14. Professional occupations require

a. grade eleven only
b. several years of study (from 4 to 8) at a university
c. no more than 2 years of study at a trades school.

15. The majority of the domestic and personal service occupations require

a. a degree from a university
b. definitely grade eleven
c. little education and training

16. Skilled occupations require

a. grade eleven only
b. little education and training
c. from 1 to 3 years of study at a trades college

17. Name three occupations in which a person can train for the job the same time he is working at it.

_____ _____ _____

18. In one sentence state what a job family is.

_____

19. When you are planning for a career why would it be better to think about a job family rather than a single job?

_____

_____

20. Name a job family that you think might interest you.

_____

21. List three jobs that would belong to the job family you named in number 20.

_____ _____ _____

22. List four careers a person can prepare for by studying at Memorial University in St. John's, Newfoundland.

_____ _____

_____ _____

23. What are the educational requirements a person must have at school before he can be accepted at Memorial University?

_____

24. At least how many years must a person study at Memorial University before he obtains a degree? _____

25. Name two trades that are offered at the College of Trades and Technology in St. John's.

_____ _____

26. For each trade you named in number 25 above, state the school grade and the subjects a person must have to enter that trade.

Trade _____
Grade Required _____
School Subjects _____

Trade _____
Grade Required _____
School Subjects _____

27. For each trade you named in number 25 above state the length of time a person must train at the College of Trades and Technology for that trade.

Trade _____
Length of Training _____

Trade _____
Length of Training _____

28. Name two programmes that are offered at the College of Fisheries in St. John's.

_____ _____

29. For each programme that you named in number 28 above state the school grade and subjects a person must have to enter that programme.

Programme _____
Grade Required _____
School Subjects _____

Programme _____
Grade Required _____
School Subjects _____

30. For each programme you named in number 28 above state the length of time a person must train at the College of Fisheries for that programme.

Programme _____
Length of Training _____

Programme _____
Length of Training _____

31. What would be the approximate cost of money to spend one year at:

(a) Memorial University _____
(b) College of Trades and Technology _____

32. If you cannot obtain from your family, relatives or friends the amount of money you would need to go to one of these institutions, how would you be able to obtain such money?

_____

33. Name two universities or colleges that are outside Newfoundland.

_____ _____

34. Name two things a person can study at universities or colleges outside Newfoundland that are not possible to study for here in Newfoundland.

_____ _____

35. Name a job you think might interest you. _____

Using the job you named in number 35 above answer questions 36, 37, 38, and 39.

36. What is the type of work involved in this job?

_____

_____

37. What age must you be to enter this job? _____

38. What is the yearly salary for this job? _____

39. What are the possibilities for promotion in this job?

_____

40. Why should you think about both your interests and abilities when you are planning for a career?

_____

_____

_____

41. Name one career that would be suitable for a person who is interested in working mainly with ideas.

_____

42. Name one career that would be suitable for a person who is interested in working mainly with things.

_____

43. Name one career that would be suitable for a person who is interested in working mainly with people.

_____

44. Check one of the following interest areas into which you think you would best fit.

Mechanical_____	Outdoor_____
Computational_____	Scientific_____
Persuasive_____	Literary_____
Social Service_____	Artistic_____
Musical_____	Clerical_____

45. Name three occupations that are related to the interest area you checked in number 44 above.

_____ _____ _____

46. Name the school subject for which you have the best ability.

_____

47. Name three occupations that would require an ability in that subject you named in number 46 above.

_____ _____ _____

48. How may the career you choose be related to your mental ability?

49. Name a career that interests you and for which you feel you have the ability.

50. List the personality requirements for the job you named in number 49 above.

APPENDIX III

SCORING KEY

APPENDIX III

SCORING KEY

First Subscale: Self and Career Planning Awareness.

This subscale included questions one to 10.

Maximum Score: 27.

(1) Student's Awareness of his Uniqueness.

Maximum Score: 6

6--Mentions six different things (interests, ability, aptitude, personality or temperament, attitudes-values-opinions, and physical make-up).

5--Mentions five things.

4--Mentions four things.

3--Mentions three things.

2--Mentions two things.

1--Mentions one thing.

0--Doesn't know any.

If the student mentioned something important that could be covered in one of the six things listed above, he received a point. Example: Some of my classmates can do much better in their school work than I possibly can.

If a student mentioned something very specific that was not considered important in making him

different from his classmates, then a score of zero was given. Example: I have black hair.

(2) The Importance of Career Planning in Grade Nine

Maximum Score: 2

2--Shows an understanding of career planning being a continuous life-long process and an awareness that deciding upon a career is an important decision that can't be made overnight.

1--Mentions that grade eleven is too late for career planning but doesn't mention why.

0--Doesn't see the importance.

(3) How to Choose a Career

Maximum Score: 3

3--Mentions the three necessary steps involved in making a wise career choice.

These steps are:

(a) discovering self characteristics,

(b) exploring and gaining knowledge of the world of work,

(c) relating self knowledge to world of work knowledge.

2--Mentions a and b above but not c.

1--Mentions either a or b.

0--Has no understanding of what to do to choose a career.

If student mentions only c above then that obviously includes steps a and b, and a score of three is given.

(4), (5) Differentiation between the terms Interest and Ability

Maximum Score: 2

2--Knows the meaning of each term.

1--Knows the meaning of one term.

0--Doesn't know the meaning of either term.

(6) Identifying Interests

Maximum Score: 5

5+--Mentions five or more different things the student likes.

4--3--2--1--One point given for each interest mentioned.

0--Has no interests.

(7) Knowing Oneself and Feeling Sure of Two Different Interests

Maximum Score: 2

2--Mentions two different interests.

1--Mentions one interest.

0--Doesn't feel sure of any interests.

(8) Understanding Present Interests

Maximum Score: 1

1--Mentions a mature reason for knowing what his two main interests are. Example: I know I

like fixing cars because I love to hang around garages and help fixing cars. I've read a lot of books and I enjoy learning about them.

0--Mentions an immature reason or no reason at all. Example: I feel sure of nursing because I think I'd like to help people. The student has not given a reason why she thinks she would like to help people and thus be a nurse.

(9) Identifying Abilities

Maximum Score: 5

Use same scoring key used for Question 6.

(10) Understanding Present Abilities

Maximum Score: 1

Use same scoring key used for Question 8.

Second Subscale: World of Work

This subscale included questions 11 to 39.

Maximum Score: 75

(11) Awareness of the Approximate Number of Jobs Existing Today

Maximum Score: 1

1--Knows the approximate number (25,000--35,000).

0--No awareness of the approximate number.

(12) Realization that People Work for Different Reasons

Maximum Score: 5

5--Mentions five or more different reasons.

Examples: Money, security, power, fulfillment, something to do, prestige, enjoyment

4--3--2--1--One point given for each reason mentioned.

0--Mentions no reasons.

(13) Knowing Job Classifications

Maximum Score: 16

16--Matches all 16 jobs to the correct classifications.

15--1--One point given for each correct match.

The correct matches are as follows:

c typist	e air line hostess	e maid or butler
f auto mechanic	b store manager	c file clerk
e R.C.M.P. Officer	a teacher	f electrician
a engineer	d insurance agent	g ditch digger
d real estate agent	g candy packer	a doctor or nurse
		f carpenter

(14), (15), (16) Knowing the General Amount of Education and Training Required for the Job Classifications

Maximum Score: 3

3--Knows all three correct responses.

2--Knows two correct responses.

1--Knows one correct response.

0--Doesn't know any of the three correct responses.

The correct responses are:

Question 14--b

Question 15--c

Question 16--c

(17) Understanding On-the-Job Training

Maximum Score: 3

3--Mentions three occupations offering on-the-job training.

2--Mentions two occupations.

1--Mentions one occupation.

0--Mentions none.

(18) Knowing what a Job Family is

Maximum Score: 1

1--Shows an understanding of the concept of job family; that it is a group of occupations related in some way--occupations that satisfy the same interests and abilities.

0--Doesn't know what a job family is.

(19) The Importance of the Job Family Concept in the Career Planning Process

Maximum Score: 1

1--Mentions a mature reason why he should think about job families. Example: If someone wants

to or has to change his job sometime, it would be easier if he had another related job in mind.

0--Doesn't know why job families are important.

(20), (21) Identifying Job Families

Maximum Score: 4

4--Identifies a job family and three jobs belonging to that family.

3--Identifies a job family and two jobs.

2--Identifies a job family and one job.

1--Identifies a job family but no jobs.

0--Does not identify a job family or any jobs.

(22) Awareness of Programmes offered at Memorial University

Maximum Score: 4

4--Mentions four correct programmes.

3--2--1--One point given for each correct programme mentioned.

0--Mentions incorrect or no programmes.

(23) Knowing the Educational Entrance Requirements for Memorial University

Maximum Score: 2

2--Knows that grade eleven with an average of 65% in particular subjects is required.

1--Knows only that grade eleven is required.

0--Doesn't know any of the requirements.

(24) Knowing the Length of Training for University Degree Programmes

Maximum Score: 1

1--Knows the correct response.

0--Doesn't know the correct response.

(25), (26), (27) Knowing the Programmes, Entrance Requirements and Length of Training at the Trades College

Maximum Score: 10

10--Mentions two trades offered and knows the correct grade and school subjects required and the length of training for the two trades mentioned.

9--1--One point given for each correct trade mentioned; one point given for each trade for knowing the correct grade required; two points given for each trade for knowing all the correct school subjects required (one point for one of some, but not all, the subjects); one point given for each trade for knowing the correct length of training time.

0--Has all incorrect or no responses.

(28), (29), (30) Knowing all the Programmes, Entrance Requirements and the Length of Training at the Fisheries College

Maximum Score: 10

Use same scoring key used for Questions (25), (26), (27).

(31) Knowing Approximate Costs for a Year at Memorial University and Trades College

Maximum Score: 2

2--Knows approximate costs for both places.

1--Knows approximate costs for one place.

0--Has grossly incorrect costs or mentions no costs.

(32) Knowing Where to Obtain Money to attend Memorial University or College

Maximum Score: 2

2--Mentions two possible sources (Canada Student Loan, Scholarships, part-time jobs, Manpower Training Allowance).

1--Mentions one source.

0--Mentions no sources.

(33) Knowing Training Institutions Outside Newfoundland

Maximum Score: 2

2--Mentions two places.

1--Mentions one correct place.

0--Doesn't mention any correct ones.

(34) Knowing Careers for which Training is not offered in Newfoundland

Maximum Score: 2

2--Mentions two careers.

1--Mentions one career.

0--Doesn't mention any.

(35), (36), (37), (38), (39) Knowing How to Explore a Job

Maximum Score: 6

6--Mentions a job, knows the work involved, the age entrance, approximate yearly salary, and any possibilities for promotion.

(35) 1--Mentions a job.

0--Doesn't mention a job.

(36) 2--Can describe the work involved.

1--Is vague in the description.

0--Doesn't know the work involved.

(37) 1--Mentions the age required or mentions there is no particular age required.

0--Mentions an incorrect age or doesn't respond.

(38) 1--Mentions approximate yearly salary.

0--Mentions a grossly incorrect amount or doesn't respond.

(39) 1--Mentions a promotion possibility, if any.

0--Doesn't respond.

Third Subscale: Relation of Self to the World of Work.

This subscale included questions 40 to 50.

Maximum Score: 18

(40) Knowing the Importance of Both Interests and Abilities being Related to the World of Work

Maximum Score: 2

2--Knows the importance of considering both interests and abilities. Example: There's not much sense choosing a career that you like if you can't do the work, or choosing one that you don't like even if you can do the work.

1--Mentions the importance of considering one but not both.

0--Doesn't see any importance.

(41), (42), (43) Relating Career to Working with Ideas, Things and People

Maximum Score: 3

3--Mentions three appropriate careers.

2--Mentions two appropriate careers.

1--Mentions one appropriate career.

0--Mentions inappropriate careers or doesn't respond.

(44), (45) Relating Interest Areas to Careers

Maximum Score: 3

3--Mentions in number 45 three appropriate careers related to the interest area checked in number 44.

2--Mentions two related careers.

1--Mentions one related career.

0--Mentions careers not related or doesn't respond.

(46), (47) Relating Abilities to Careers

Maximum Score: 3

3--Mentions in number 46 three appropriate careers related to the ability named in number 46.

2--Mentions two related careers.

1--Mentions one related career.

0--Mentions careers not related or doesn't respond.

(48) Relating Mental Ability to Choosing a Career

Maximum Score: 2

2--Knows how one's mental ability can influence one's career choice. Example: A person must have the mental ability to be able to do both the educational training required and the type of work involved for the career choice made.

1--Mentions one factor--either the training or the type of work involved.

0--Cannot relate mental ability to career choosing.

(49), (50) Relating Personality to Careers

Maximum Score: 5

5--Mentions five or more characteristics related to the job named in number 49.

4--3--2--1--One point given for each related characteristic.

0--Mentions characteristics not related or doesn't respond.